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EDITORIAL.

No one, so far as the Editor knows, has hitherto undertaken to characterize Shakespeare's treatment of youth and adolescence. Mr. Libby, who here essays this task, is well qualified for it by years of careful study of Shakespeare, both at home and abroad, and his characterizations have about them a breadth and virility that is in strong and pleasing contrast with much of the writing about and about Shakespeare. His article is of value not only for educators, but for literature in general.

Of all the many studies of the elective system in American education, that of Professor Phillips seems more broadly based upon actual facts as they exist to-day. Incidentally, he gives us much other very valuable information concerning the present condition of university education in this country. The tendency is, as he says, more and more toward free education, and there is but yet little indication that the colleges will ever settle on a small and central corps of topics for all students. In the second part of his article, which discusses the elective system in secondary schools, it is plain that this system is a characteristic mirror of our national life. The writer fears that we have lost the old Greek conception that the highest good consists in the perfection of man as a natural being.

In the third article, Mrs. Moore presents further observations made with a thoroughness characteristic of her previous work, suggesting many important differences between boys and girls

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in this respect. This article really opens up a new and promising field.

Dr. Chamberlain resumés the chief anthropometric studies that have been made in different nations within recent years. Although only a portion of these studies show growth relations, those that do so are of special significance.

Mr. Allen prints a comprehensive preliminary study on the great topic of the use of myth in school; shows how both sentiment and practice in many lands and places have tended in this direction; and suggests the high educational value of this mental pabulum for the young.

The usual reviews and book notes follow.

SHAKESPEARE AND ADOLESCENCE.

By M. F. Libby.

I.

Shakespeare and Scott have mirrored human nature more comprehensively than other writers in English. Each of them far outstrips all others in the completeness with which he has portrayed the age of rapid development between fifteen and twenty-five. In order to estimate exactly the number of characters of this period found in each it would be necessary first to canvass thoroughly all their works for exact references to age and to note all indications of age where no direct proofs were forthcoming. While this might be of some use it will suffice for our present purpose to say that about one-fourth of the thousand characters of Shakespeare may be called adolescent if that word be extended to cover the years denoted by the word *Juvenis* among the Romans. Counting in a very arbitrary manner, to which no importance should be attached, we may reckon 74 interesting adolescents among the comedies, 46 among the tragedies, and 19 among the histories. (Of children there are from four or five to twelve or fifteen according to whether the most interesting or every possible mention be considered.) There are many adolescents who appear but have no interest for our study.

It may suggest the vast amount of keen interest and observation shown this subject by Shakespeare to make a select list of thirty characters who, either on account of direct references to their age, or because of their love stories, or because they show the emotional and intellectual plasticity of youth, may be regarded as typical adolescents. Any reader who doubts whether some of these may fairly be regarded as belonging here must feel free, upon glancing at the evidence and the opinions of the critics, to alter the list at pleasure. Romeo, Juliet, Hamlet, Ophelia, Imogen, Perdita, Arviragus, Guiderius, Palamon, Arcite, Emilia, Ferdinand, Miranda, Isabella, Mariana, Orlando, Rosalind, Biron, Portia, Jessica, Phebe, Katharine, Helena, Viola, Troilus, Cressida, Cassio, Marina, Prince Hal, Richard of Gloucester: these thirty have been selected on the principle of pedagogical suggestiveness, and perhaps rather too capriciously, but where can one find any such list for suggestion of profound study and knowledge of the head and heart of youth?

To do any kind of justice to the subject of this paper would involve not only a study of each of these but of twenty or thirty more hardly less important. But besides all the characters in the plays there are those in the sonnets and poems, and perhaps the knowledge shown of adolescence is greater, or at any rate more concentrated and profound, in these than in the plays. The plan proposed is merely to give a brief commentary upon the poems and some of the chief characters in this first section and then to dwell more fully upon three great typical groups in the succeeding three sections. The poem entitled *Venus and Adonis* is one for which some critics have even dared to frame elaborate apologies. It is perhaps the greatest proof we have of Shakespeare's fitness to handle the problems of puberty and adolescence. It is a successful attempt—perhaps the only successful attempt in literature, to face the problem of sexual passion in a perfectly candid, natural, and naïve manner and to do perfect justice to its seductiveness without a single note of pruriency or a single bribe to self-indulgence, and yet equally without a single signal of weakness, distress, shame or pretence. This is true of the poem if it be read through from end to end as it was conceived and meant to be read, however untrue it may be of fragments. The work is a masterpiece and model in the management of the emotions. It is a catharsis for the erotic passion. It arouses the feelings of desire only to carry them into feelings of a safer and, in the circumstances, manlier order. And whoever reads it in a licentious frame of mind will inevitably be disappointed by finding it the purest of poems. There is a whole philosophy of art and pedagogy latent in this great work, and one may well doubt whether there can be any real resting-place for educational theory short of a courageous envisagement of this very tale of temptation in which a passion for sport and adventure proves too much for any latent tendency to less healthful emotions. Here, as elsewhere, large world-meanings spring from the simple genius of the poet's story, and one can almost see in the tale of Adonis and his indifference to the love-goddess a symbol of all the innocence and vigor that discovered the Cape of Good Hope, and the road to America, and all the chivalry and daring that discovered the law of gravitation or the law of natural selection; for these remote analogies are the best contributions of a philosophy of art. The story of the Passionate Pilgrim is replete with the deepest knowledge of the passions of early adolescence.

In the series of sonnets the whole poetical philosophy is packed into the smallest compass. It is nothing to the speculative reader but a series of symbols of all the matters that are really of most worth to humanity. Its foremost theme is

friendship, or a friendship between two men so fond of each other that their relations became those of the purest and most ideal love, so much so that in fact the verses have often been mistaken for sonnets to a lady. The whole series culminates in sonnet 116 in which the poet declares emphatically that pure love is the sole beacon of humanity; and it cannot be too often said that he here refers to that fervent adoration which may occur between persons of one sex. One might say that a straight line connects this sonnet with the best teachings of Socrates, Plato and Aristotle, and that in it humanity picked up the clew which it had lost in the refinements and turmoil of the great interval: though in reality the Italian poets and others had perceived the truth with almost equal clearness. In the plays there are several cases of such friendships, the most striking being in the *M. N. D.* and in *The Two Noble Kinsmen:* it is probable that the latter play has been somewhat misjudged through under-emphasis of this factor. At the conclusion of the sonnet the poet says

> " If this be error and upon me proved
> I never writ nor no man ever loved :"

and this is a very extraordinary emphasis for Shakespeare to use, and challenges one to résumé the chief points of what he has been saying, namely; (1) That there is no law against the marriage of *true minds:* (2) That love does not change with externals (" die Liebe hoeret nimmer auf,"): (3) That this kind of love is *not appreciated;* all which have a great deal of mystic suggestiveness when connected in that way, and emphasized by the deepest of all poetical psychologists. Love, he says, that changes with circumstances is egoism, or lust, or delusion, but it is not true love.

> " O, no! it is an ever-fixed mark,
> That looks on tempests and is never shaken;
> It is the star to every wandering bark,
> *Whose worth's unknown* although his height be taken."

As literature this is of course touching, moving, thrilling, but what is its meaning to science? If philosophy could ever become as interesting to adolescents as Plato and Shakespeare found it, they would leave any passion in their passion for ideas, and that may be one sense in which love might be called a socratic Eros, or a " star to every wandering bark." Turning from the sonnets which we have characterized as a philosophy of friendship or love, and glancing at the earlier plays, we find at first no very profound analysis of adolescent moods.

In *The Two Gentlemen of Verona* (I, 1) he emphasizes the value of seeing the world as part of education, and the danger of love to the finest wits: he also shows that he was consider-

ing the value of university life (I, 3). The latter part of the play shows his interest in outlaws and their charm for youth. In *Love's Labour's Lost* we see a study of the value of learning which is very suggestive even yet (I, 1).

Biron. "Study is like the heaven's glorious sun,
That will not be deep-searched with saucy looks;
Small have continual plodders ever won,
Save base authority from others' books.
These earthly godfathers of heaven's lights
That give a name to every fixed star,
Have no more profit of their shining nights
Than those that walk and wot not what they are.
Too much to know is to know nought but fame;
And every godfather can give a name."

But Biron makes amends to "that angel knowledge" later on. When they all agree to study for three years and see no women he says:

"Give me the paper; let me read the same;
And to the strict'st decrees I 'll write my name."

If one were to read in an unwarrantable meaning here, one might guess that Shakespeare thus early felt the need of obeying conventions which went against his nature, for the sake of influencing the current of the times. Biron says again

"So to the laws at large I write my name."

He signs the laws and plays the game by the rules laid down though all the while amused by their artificial vagaries. Finally the whole plan comes to nought, and he learns the lesson that *laboring* for an end is often the best way to defeat that end. Many have thought Biron is the picture of the young Shakespeare. In one of his last plays he wrote

"Jog on, jog on, the footpath way
And merrily hent the stile-a,
A merry heart goes all the way,
Your sad tires in a mile-a."

If this is his view it strongly suggests that love's *labor's* lost, and that only what is done in a spirit of sport and enjoyment is a solid advance; but he learned that sports may be played with most strenuous endeavor.

Shakespeare has drawn the greatest villians in literature. Edmund, Iago, Antonio, and Richard of Gloucester are far greater devils than Milton's Lucifer or Goethe's Mephistopheles. The only adolescent among them is Richard of Gloucester as he first appears in Henry VI, but even there he is too mature in mind to deserve notice here.

In *Titus Andronicus*, if we agree that Shakespeare wrote it, we may study how in his own earliest authorship (at 24) he was vastly interested in bloodshed, crime and horror; it seems likely

that a psychological study of adolescence will go far to make it probable that Shakespeare *would* begin tragedy by just such a play.

It is clear that in the middle period of his work he had still a great admiration for physical prowess and motor activity. Orlando wins Rosalind's heart by his wrestling, and in spite of his intensely romantic interest there is even here a touch of the favorite platonic youth in this athletic hero. But the play has by no means the Hellenic freedom and power of *Cymbeline*—it is too sweet and sentimental to be compared with that most wholesome work. Perhaps it would not be too rash to mention Benedick and Beatrice as types of witty adolescents; they represent a very large class indeed of students of our time.

Mariana in *Measure for Measure* is a sketch of great sensibility and sympathetic insight of a type of girls in whom love has been checked and defeated of its natural issue by unhappy circumstances.

Jessica in *The M. V.* shows the effects of being brought up in an unhappy home; she says to Launcelot "Our house is hell."

In *All's Well that Ends Well* Shakespeare shows a woman who maintains her right to select a husband: the characters of Miranda (and the allusion to Dido in the *Tempest*) and Perdita suggest that he thoroughly admired a woman of this type so long as she was bold in innocence. Perhaps Olivia, in *Twelfth Night*, is a type of a youthful puritan, it is hard even to guess what the poet thought of her.

It would certainly be going too far to call Richard II an adolescent, though he suffers from an invincible boyishness; but a study of his character would prove very helpful in connection with esthetic education, as it illustrates in a manner likely to cause wonder (even in the most seasoned student of the plays), the endless wealth of analysis which Shakespeare has here bestowed upon the lyric or imaginative character as contrasted with the active or motor temperament, and yet this was written apparently before he was thirty.

The character of Prince Hal is developed with such fulness and is of so great a significance in the light of modern theories of adolescence that it craves a separate and fuller treatment, before giving which we may conclude this hasty catalogue by a reference to the "Two Noble Kinsmen," Palamon and Arcite, who are, without doubt, the most ill-treated of all Shakespeare's youths.

The Two Noble Kinsmen was formerly either ignored or reviled. Most readers of Shakespeare have never seen it, as it does not occur in popular editions. Only special students have read it through. Critics now agree that Shakespeare wrote a

very large part of it. Its theme is Greek friendship; the story is from Chaucer, and is deepened and treated with mystic symbolism. Some students believe that De Quincey was right in thinking that parts of it touch the highest point of English style. The heroes belong to the group of characters to be treated of in the fourth section of this paper, that is, to the type of pure *Naturkinder*, great in friendship, great in simplicity, and great in heroic action.

Whatever may be the truth about the minor characters of this play, and the evidence from psychology is all to be brought forward yet, it is certain that no finer types of youth can be found anywhere than Palamon and Arcite as depicted in the scenes now generally ascribed to Shakespeare. By a happy inspiration Dr. Rolfe has put a picture of two Greek youths on horseback from the frieze of the Parthenon in the front of his edition of the play; nothing could more happily strike the keynote of a work which may be popular when the troubles of Hamlet and Lear are forgotten in a golden age of health and power.

Passing by great numbers of suggestive studies, such as the study of adolescent anger in Katharine the shrew, the study of rustic vanity in Phebe (*As You Like it*), of feminine fears in Viola and Helena, of erotic passion in Troilus, and of inconstancy in Cressida, of selfishness in Goneril and Regan, and of filial piety in Cordelia, let us turn in conclusion to the character of Prince Hal.

The interest in this portrayal, felt by all Anglo-Saxons, indicates the character as a racial type. He is perhaps the only really heroic type which Shakespeare has drawn from actual history. He is regarded still in England and America as a typical Englishman of high class who, after sowing his wild oats, develops a thorough-going responsibility toward his environment and reacts vigorously in the interests of honor and justice. He combines the solid sense for fact and real life with that fine background idealism which the race equally demands in its leaders. He appears in *Henry IV* part first, *Henry IV* part second, and in *Henry V.* We see him first in company with Falstaff (*H. IV*, 1st part, I, 2). In this scene the prince is still very young and Falstaff addresses him repeatedly as "sweet wag," and calls him "sweet young prince." The youth is at a stage in his development when this lying, thieving, blasphemous, lecherous, gluttonous and bibulous, but jolly and humorous old man rouses in him a strong admiration and an irresistible tendency to imitation. He is pleased when the old man tells him he is bad, and says he is "indeed able to corrupt a saint."

"Before I knew thee, Hal, I knew nothing; and now am I,

if a man should speak truly, little better than one of the wicked." At the end of this very scene, however, the prince utters a speech which proves beyond cavil that he gave Falstaff but a third of his heart. He was, as one may say, educating the man of desire, the lowest of the three Platonic levels, and he fully meant to build higher in public esteem:

> "My reformation, glittering o'er my fault,
> Shall show more goodly."

The robbery at Gadshill and the jollification following, at which Falstaff tells of the men in buckram, and Falstaff and Hal mimic Henry the Fourth as a stern father, show a keen appreciation of the adolescent traits of love of brigandage and of acting a part.

In Act III, scene 2, we find the king playing this rôle in reality. His keen policy and profound knowledge of character mingled with real ambition for and love of his son make this deeply interesting. He says God has punished his own sins by giving him this scapegrace son, who is the worst of his many enemies. This makes a deep impression on the generous heart of the young Henry. The father wonders that a son of his can have a taste for pleasures so low and poor; he compares him with poor Richard II, whom he pretends to find very similar. He says the common people themselves are sick of seeing a prince of the blood making himself so cheap. At this point the boy exclaims,

> "I shall hereafter, my most gracious lord,
> Be more myself."

But it is when he appeals not merely to filial affection, self-respect, and family pride, but to his sense of honor and ambition that he thoroughly rouses his blood. He draws a picture of his rival Hotspur, tells of his feats of arms, his undying fame, his promise of greatness, and wishes he had such a son. Then he ends dejectedly by a comparison of Hal and Hotspur:

> "Thou that art like enough, through vassal fear,
> Base inclination, and the start of spleen,
> To fight against me under Percy's pay,
> To dog his heels, and curtsy at his frowns,
> To show how much thou art degenerate!"

This at last evokes the true Plantagenet nature, and a long, rolling eloquence of chivalry, heroism and invincible pride:

> "Do not think so; you shall not find it so:
> And God forgive them, that so much have sway'd
> Your majesty's good thoughts away from me!
> I will redeem all this on Percy's head,
> And in the closing of some glorious day
> Be bold to tell you that I am your son!"

After twenty-five lines more in the same sonorous strain, the king replies,

> "A hundred thousand rebels die in this;
> Thou shalt have charge and sovereign trust herein."

From this onward he begins to assume his duties in accordance with the faith his father has in him, until in the last act he saves the king's life at Shrewsbury and kills Hotspur.

In *Henry IV*, part 2, we see him still interested in the low life of Eastcheap, but he is older and more manly; he treats Falstaff with more contempt and yet he enjoys the feeling of power which the indulgence of his primitive instincts in this society offers him. He does not approve of Falstaff in his own best judgment, and yet he seems to feel that he has something to learn from his barbaric philosophy, a perfect sample of which is found in his comments on Prince John of Lancaster, near the end of the third scene of Act IV. "Good faith, this same sober-blooded boy doth not love me; nor a man cannot make him laugh; but that 's no marvel, he drinks no wine. There 's none of these demure boys comes to any proof; for thin drink doth so overcool their blood, and making many fish-meals, that they fall into a kind of male green-sickness; and when they marry, they get wenches. They are generally fools and cowards, which some of us should be too but for inflammation. A good sherris-sack hath a two-fold operation in it. It ascends me into the brain; dries me there all the foolish and dull and crudy vapors which environ it, makes it apprehensive, quick, forgetive, full of nimble, fiery and delectable shapes, which, delivered o'er to the voice, the tongue, which is the birth, becomes excellent wit." Here follows an equally astute account of the second property of wine, showing a remarkable comprehension of the close relation between bodily states and feeling. "The second property of your excellent sherris is, the warming of the blood; which, before, cold and settled, left the liver white and pale, which is the badge of pusillanimity and cowardice; but the sherris warms it, and makes it course from the inwards to the parts extreme. It illumineth the face, which, as a beacon, gives warning to all the rest of this little kingdom, man, to arm; and then the vital commoners and inland petty spirits muster me all to their captain, the heart, who, great and puffed up with this retinue, doth any deed of courage; and this valor comes of sherris." After further analysis of its merits he concludes:

"If I had a thousand sons, the first human principle I would teach them, should be, to forswear thin potations and to addict themselves to sack:" and this may be called the pedagogy of Falstaff. One might adduce in further proof of his gift for

psychology Falstaff's enunciation of another great principle of pedagogy: "it is certain that either wise bearing or ignorant carriage is caught, as men take diseases, one of another; therefore let men take heed of their company."

In the last scene of this play Hal becomes Henry V and banishes Falstaff and his friends from his person:

"I know thee not, old man; fall to thy prayers." Perhaps the truest explanation of this seemingly heartless act is that the prince has overcome in his own nature the very qualities which he here condemns in Falstaff and that he is not in honor bound to be better to them in others than in himself; and for the rest he treats him well enough.

In *Henry V*, we see how solid and splendid a character the prince had built on his early experience. He is a thorough man-of-the-world, with a real insight into the thoughts and feelings of the lower class and of his rude and brutal soldiery, among whom he is an idol. In the early scenes we see him acting his part as a true king of men, standing up for the laws and honor of the kingdom and ruling with wisdom and courage. In a word the whole play shows, to continue the reference to Plato, how the characters of courage and wisdom may harmonize with the lower nature developed and controlled. He is a typically just and human king for whom men count it an honor to risk their lives. He feels the cares of state as we learn from the great speech in Act IV, sc. 1.

> "Upon the king! let us our lives, our souls,
> Our debts, our careful wives,
> Our children, and our sins lay on the king!"

But this is merely a soliloquy and before the world he is always the good soldier, decided in manner, earnest in purpose, cheerful and elastic of temper. His last speech of scene 8 is an acknowledgment of the mercy of divine providence, to whom like a great king he directs the state for guidance:

"Let there be sung *non nobis* and *Te Deum*." His own philosophy is perhaps best expressed in his speech to his bride: "a good heart Kate is the sun and the moon; or, rather, the sun, and not the moon; for it shines bright and never changes, but keeps his course truly."

Though there is so great an amount of data concerning the education of Prince Hal that we learn the chief influences both of his heredity and of his early environment, all these facts are given quite naturally as a part of the story and there is absolutely no evidence discoverable to the effect that the poet is preoccupied with any theory whatever concerning pedagogic principles.

II. Romeo and Juliet.

It is becoming clearer every day that all who have written about Shakespeare's "true meaning" have been merely eisegetes and that either, as Professor Santayana says, he was innocent of any religion or philosophy, or else he has concealed them behind a sphinx-like mask. The phrase "Shakespeare says" is still in common use but in fact Shakespeare, though he makes his characters speak emphatically enough, says nothing. The plays and poems suggest a hundred views of life but advocate none. Even those who argue that we can judge of his opinions by the frequency with which he presents certain views, have no logical ground for their doctrine because it is always competent to reply that he was a shrewd theatre manager who cared more about pleasing others than about airing his deeper thoughts.

Nevertheless, just as some one said of Michelangelo that his statues look not as if he studied but as if he *had* studied anatomy,—so many of Shakespeare's works suggest the idea that he *had* studied a great many serious disciplines, such as ethics, sociology, the philosophy of history, some of which were hardly in embryo in his time.

This remark is peculiarly true of the study of adolescence as we know it at the present day. The sure hand with which he has selected just the essential features of the adolescent, the rich suggestiveness of both his youthful characters and the situations in which his chosen stories place them, and the immense authority which a universal verdict has given to the soundness of his observation make it seem worth while to glance at his productions from this new angle of criticism.

Science has perhaps hardly yet done justice to the Shakespearean ethology, implicit and uncertain though it be. A great dramatic type is a synthesis following a vast amount of differentiation and classification, but precisely because the poet makes a *complete* synthesis of the object he analyzes—his synthesis is treated as of no scientific worth. With these premonitory remarks there can be no danger in calling attention to the scientific suggestiveness of the leading studies of youth to be found in the poet's works. Let us begin, therefore, by asking not what did Shakespeare *mean* or *think* about the education of Romeo and Juliet; that would be to run into eisegesis; but what suggestions can we get by studying the carefully observed, significantly selected, exactly expressed facts about two adolescent types, so important that they are known more intimately to the civilized world than most historical personages.

Gervinus taught that the true lesson of *Romeo and Juliet* was expressed in the words of the Friar, in which he teaches

that temperance and moderation are the ideals of youth. "Violent delights have violent ends;" don't love too deeply, it is dangerous; be calm and restrain your passion and it will die out, leaving you a good respectable son or daughter of the church. This absurd opinion is still largely held. It takes a speech from a good kindly ascetic and foolish old gentleman and quotes it to the tune of "Shakespeare says." Dowden has rejected this German view only to substitute another nearly as bad. He says that Shakespeare does n't agree with the monkish Laurence but that he wants us to feel the greatness and the exaltation and tragic grandeur of dying for love: it is worth while dying to die in such an instructive, thrilling, and ennobling style. Well, we can only answer that this is another specimen of subjective criticism, and that possibly Shakespeare did think this, but that if so it was a foolish thought. The view which I propose to suggest and which probably Shakespeare never bothered thinking about, in the abstract at any rate, is altogether different, and is mainly this, that the lovers were all right, and, in fact, perfectly ideal, and that their death was a shame and a disgrace to the ignorance of adolescence that characterized all who surrounded them and that is the fruitful cause of tragedies to-day as it was then. Or in other words, that this is only one of several tragedies in Shakespeare's works where bad education is the form which "Fate" assumes, and that the most probable interpretation of the mystery lies in what "Shakespeare says" through the mouth of a fool (Feste) namely that "there is no darkness but ignorance."

Their parents, as we shall see, loved them deeply, everybody loved them well, but no one loved them *wisely*, and their lights went out in the darkness of ignorance. This irradiation of deep love into wise and learned love, is what "Shakespeare says" in the series of plays, from that in which Romeo and Juliet perish to that in which Ferdinand and Miranda celebrate a marriage of "true love" and return from the island to rule their kingdoms.

Every line of the *prologue* emphasizes the idea that it is through the parents' mad passion that these star-crossed lovers go to ruin. Only through the loss of their children can these blind parents be purged of their murderous enmities.

The first scene falls into three parts. He first shows, in a vivid manner, in what an atmosphere of hot-blooded disquiet the hero and heroine have come to adolescence. First the servants, then the young bloods of the two houses, and finally the parents themselves are drawn, or rather rush incontinently, into a disgraceful street-broil, such as in our day would be possible only to drunkards and their mistresses. The prince represents perhaps the wisest reaction to this when he says

"What ho! you men, *you beasts*,
That quench the fire of your pernicious rage
With purple fountains issuing from your veins."

The second part of the scene (line 123-161, Globe Edition) reveals the ignorance of Montague regarding his son Romeo, the lack of confidence between them, together with an uneasy sense on the father's part of his parental duty to the boy in his time of greatest need. He relates how Romeo acts peculiarly, weeping, sighing, returning home at daybreak only to shut out the light from his room and pen himself up in private.

"Black and portentous must this humor prove,
Unless good counsel may the cause remove."

This is the wisest word Montague utters.

Benvolio retorts, "Have you importuned him by any means?"

Mont. "Both by myself *and many other friends:*
But he, his own affections' counsellor
Is to himself—I will not say how true—
But to himself so secret and so close,
So far from sounding and discovery,
As is the bud bit with an envious worm,
Ere he can spread his sweet leaves to the air,
Or dedicate his beauty to the sun.
Could we but learn from whence his sorrows grow,
We would as willingly give cure as know."

Thus this silly, pompous, passionate, but kind-hearted old man perceives through the mist of his own vices that Romeo needs wise counsel, but he does not see that it is the atmosphere of rage and violence bred, by his own worship of Venus and Mars that makes the case of Romeo a foregone fatal conclusion; for it is of the best minds that love is the canker, and this canker must flourish where precept and example urge to the life of primitive sensuality and fury, and where no means are found of irradiating the vast tides of pubertal vitality into passion for ideas, and reason, and spirit.

The last division of the scene shows us Romeo himself, an immortal portrayal of the adolescent insanity of the months when every organ and tissue of the body is thrilling and vibrating with the maddening pulsations of first manhood, and where, as has been well said, insanity is the normal condition. He is a mass of conflicting emotions, full of griefs and joys, all entirely imaginary, for as we soon learn he is in love with a girl of his own creation, or, at least, whom he forgets entirely when he meets Juliet. He wants counsel. There is a touching instinct in him that teaches him to seek for guidance, and Benvolio would gladly help him; but who is Benvolio to help him? The unsolved problem here incarnate in a nature of the

fullest and intensest human faculty and capacity is not to be solved by words, and least of all by the words of a thoughtless youth.

Having thus sketched Romeo, a type of early adolescent passion, so full, well-rounded and vigorous as to seem capable of standing as a figure of all mankind at that age, the poet turns to expound a companion picture of the dawn of womanhood. The second scene falls in two. The first part promptly reveals the fact that Juliet's father, in spite of certain refinements of characterization, is of the same class of parents as Romeo's. He is discussing the marriage of Juliet with Count Paris, who here proposes for her hand. He objects to Paris that Juliet is too young to be married:

> "My child is yet a stranger to the world,
> She hath not seen the change of fourteen years."

Professor Wendell (*William Shakespeare*, p. 125) says that those who attach importance to the fact that in Brooke she is sixteen, and in Shakespeare fourteen may be right; "More probably, however, at least to some of us, the reason why Shakespeare's Juliet is fourteen seems to lie in a single pun, at the time of Juliet's first appearance, etc., etc." Here follows an elaborate argument that Shakespeare merely said fourteen so that he could work in a weak pun by the nurse. Now, as a matter of fact, Shakespeare has discussed Juliet's age almost to tediousness in two scenes. Nowhere has he dwelt so emphatically on the subject of the precise age of a character, and Professor Wendell has entirely overlooked the fact that already in scene 2 Capulet had used the couplet above and followed it by:

> "Let two more summers wither in their pride
> Ere we may think her ripe to be a bride."

When Paris retorts,

> "Younger than she are happy mothers made."

Capulet replies, "And too soon married are those so early made." Yet he gives his consent, and invites Paris to an old accustomed feast for the evening, when he may hope for "Even such delight among fresh female buds" as "lusty young men" have a right to expect. This will give him opportunity for exercising the male right of selection:

> "Hear all, all see,
> And like her most whose merit most shall be."

As will often appear in this paper Shakespeare makes all pedagogy (not that he ever bothered his head about it in the abstract) culminate in selection and courtship.

In the second part of the scene we see Romeo getting coun-

sel again from Benvolio, whose cure for the turgid love humors of Romeo is to plunge into new forms of the same disease:

> " One desperate grief cures with another's languish."

He wants light and guidance and is directed to the ditch by another blind man.

In the third scene we get the sketch of Juliet's education at which the preceding scene merely hinted. The mother is depicted as a foolish worldly woman who takes counsel with that delightful old bundle of primitive social energy, vulgar ignorance and warm human animality, the nurse.

Lady Capulet says: " Nurse give leave awhile. We must talk in secret; nurse, come back again; I have remembered me, thou's hear our counsel." As a fact the nurse does most of the talking and counselling. The child has been nursed, fondled, reared in this atmosphere of refined hedonism. When she calls marriage an honor the nurse is charmed:

> " An honor! were not I thine only nurse,
> I would say thou had sucked wisdom from the teat."

The mother's words are not really less sensual.

> " Read o'er the volume of young Paris's face
> And find delight writ there with beauty's pen."

Their philosophy of life is simple: live well, that is eat well, drink heartily, and marry a husband who will prove " a precious book of love." The nurse has the last word,—

> " Go, girl, seek happy nights to happy days."

All this seems harmless, affectionate, natural, and even sensible; but it so happened that Juliet needed higher pleasures, and this homely cyrenaicism was of no use to her. She desired love as the nurse knew it, but she desired more.

The next scene shows us Romeo and his friends going disguised to Capulet's feast. He will also try his right of selection among the " fresh female buds," though he believes he loves Rosaline already. The scene shows how in the lover all mental life is swayed by fancy, it contains the speech by Mercutio about the fairies' midwife. The scene ends with a touching hint of the approach of trouble, from Romeo:

> " Some consequence yet hanging in the stars
> Shall bitterly begin his fearful date
> With this night's revels."

The poor youth feels that he and his friends are not masters by reason and knowledge, but slaves of fate and instinct: it is a frequent adolescent mood of presentiment.

The first act ends with the famous ball-room scene in which Romeo meets Juliet, and they fall passionately in love. This

incident is portrayed with a wealth of romantic feeling, and with the most exalted purity, amounting almost to a sort of natural religious emotion. It is difficult to conceive how any one could ever have dreamed that the poet would have moralized against the holy innocence of this scene. Yet it is here that the end begins, and Juliet says

> "Prodigious birth of love it is to me,
> That I must love a loathed enemy."

It is unnecessary for our present purpose to follow the courtship of Romeo. All the characters of early adolescence are developed in these famous scenes of Act II. Fancy rules all the acts of the lover and it is the dangerous fancy which converts itself at once into motor activity. There is no brooding sentimentality now that he has found his mate; he does not dream of things he never means to do like weaker or more foolish natures. In the first scene he climbs the wall of Capulet's orchard and leaps down within; in the second, amid circumstances of the deadliest peril, he wooes and wins his bride in words of fire and poetry that have moved the whole civilized world, and whose popularity for three hundred years among the most judicious races is a better proof of their value to psychology than could be got from a thousand questionnaires. If there is any conversion in the religious experience of an intense and natural soul it is that which comes from recognizing the divine element in love. There is a distinct rising above mere earthly experience in such lines as these:

> "O! speak again, bright angel; for thou art
> As glorious to this night, being o'er my head,
> As is a winged messenger of heaven
> Unto the white-upturned wond'ring eyes
> Of mortals, that fall back to gaze on him
> When he bestrides the lazy-pacing clouds,
> And sails upon the bosom of the air."

He has found a goddess, a religion, he is full of the courage of the martyr, full of self-renunciation, humility and simplicity:

> "My name, dear saint, is hateful to myself,
> Because it is an enemy to thee."

Shakespeare's philosophy and psychology are mere poetry, but like Plato's poetical passages they are of the deepest significance, and this act itself must be taken with scientific seriousness if education is to solve the problem which Montague and Capulet failed to solve.

In the third scene we meet Friar Laurence and are made to feel the perfect worthlessness of the doctrine of inhibition and suppression. When the good priest hears that Romeo has not slept all night, he says,

> "God pardon sin! wast thou with Rosaline?"

He has a pious desire to make peace between the two families and hence favors the match. He fails entirely to measure the rage of the parents and thus misguides the lovers as much as any one. The fourth scene enforces all that has been said of the friends and environments of the lovers; everything conspired to make them creatures of fancy and caprice, nothing tended to feed their need of wisdom in the conduct of life.

In the fifth scene Juliet learns that her plan of marrying clandestinely and thus cheating the wicked scheme of her parents has been successfully arranged by Romeo and the nurse. In the sixth and last, the pious friar, with as much sense and goodness as he has, and in spite of the terrible storm that the act must provoke, makes them man and wife.

As everybody knows, the immediate cause of the tragedy in this play is that Romeo kills Tybalt in a public place of Verona. But if we ask why he killed him, it is evident that we are thrown back upon our main thesis, for Tybalt hated Romeo merely as he hated the whole Montague family, that is, as an enemy of the Capulets. It was Tybalt who had discovered Romeo at the ball and had wished to strike him dead at the feast. It was Capulet who, from a sense of honor, had forbidden a scene and thus permitted Romeo time to meet and love his daughter. Even in his bad system of espionage and petty control he was not wise or vigilant, for if he had kept Romeo away from his house the tragedy would have been averted.

In the first scene of Act III we are shown how the highest and most honorable motives, namely, loyalty to the beloved Mercutio and to his own family led Romeo to kill Juliet's kinsman, and how the wise and just prince of Verona exiled the youth from his native city and hence from his bride. In the second scene the young girl's heart is torn between love of her kinsman and love of her husband. In the third we find the friar trying to soothe Romeo and comfort him with his skim-milk philosophy:

Romeo. "O! wilt thou speak again of banishment!"
Friar. "I'll give thee armor to keep off that word;
Adversity's sweet milk, philosophy,
To comfort thee, though thou art banished!"
Romeo. "Yet 'banished!' Hang up philosophy,
Unless philosophy can make a Juliet."

It is not to be expected that a youth who has never been led to love ideas can now suddenly accept them in lieu of his bride, and this is the condemnation of the Friar and all his kind that they oppose abstractions which they have failed to make warm and real to instincts which mean all the world and more to youth.

"Thou canst not speak of that thou dost not feel,"

groans Romeo.

"O! then I see that madmen have no ears,"

says the friar, to which Romeo responds,

"How should they when that wise men have no eyes."

What indictment more true or more terrible of any system of pedagogy that does not even aim at accounting for all the passions and emotions of the youthful make-up?

The nurse enters and draws a pitiful picture of Juliet's condition. In the tempest that has now broken on them she stands alone unaided and untrained. Romeo on hearing of her state can think of nothing but self-destruction. It is a moving scene, but it is not intended as Dowden says to convince us of the nobility of love tragedies, but to suggest the need of pedagogy, which will know how to direct these distinctive energies and to turn the tears of Romeo and Juliet into useful and sane activities. The poor friar at last calms matters by sending the lover to comfort his bride.

In scene four the parents of Juliet, entirely ignorant of the state of her heart, promise Paris that she shall marry him on Thursday.

The fifth scene marks the parting at morning of the hero and heroine. They have spent the night together, and the passionate leave-taking is their last conversation. From this scene onward the pathos and unbearable sorrow of this tragedy of adolescence is heaped up more and more. Terror and pity sweep through the lines like waves of a stormy sea, until the final terrific catharsis, in which the whole dark story is swept as it were up to its solution on the shores of some other life. A tragic conclusion is after all a confession of the poet's failure to solve his poetic problem. He has struck upon subjects which he cannot think to a conclusion. He has involved his favorite characters in difficulties, out of which he sees no probable or reasonable egress; he sacrifices them to fate and commends their souls to an unknown god.

We need not follow the struggles of these innocent youngsters to undo the fetters that confine and strangle them. It is the old story of the ignorance and vice of the parents strangling the children to death, like the serpents of Laokoon, but the parents, like Laokoon himself, are crushed by the same bonds, for their ignorance is a legacy from generations and generations of even greater folly and sin.

It will suffice to touch upon the most striking points in the remaining acts which support the main thesis of this paper. After the entrance of Juliet's father (III, 5,) we begin to see

the meaning of a very high degree of folly in the management of adolescence. The father finding Juliet in tears makes a few remarks, showing his usual insight:

"How now! a conduit girl? What! still in tears?"

and after ten lines of this kind of wit,

"How now, wife!
Have you delivered to her our decree?"
Lady C. "Ay; sir; but she will none, she gives you thanks.
I would the fool were married to her grave."

And later the father says,

"Fettle your fine joints 'gainst Thursday next,
To go with Paris to Saint Peter's Church,
Or I will drag thee on a hurdle thither.
Out, you green-sickness carrion! out you baggage!
You tallow-face!"

The wiser child pleads on her knees for a freedom from conventionalized prostitution, but is answered with brutal revilings. Even the the nurse protests at last and Capulet's weak rage boils over:

"God's bread it makes me mad.
Day, night, hour, tide, time, work, play,
Alone, in company, still my care hath been
To have her matched!" etc., etc., etc.,

and finally if she prove stubborn,

"Hang, beg, starve, die in the streets,
For, by my soul, I'll ne'er acknowledge thee."

On his exit Juliet moans:

"Is there no pity sitting in the clouds,
Which sees into the bottom of my grief?"

and in her next appeal, to her nurse, she says

"Comfort me, counsel me, alack, alack,
That heaven should practise stratagems upon
So soft a subject as myself!"

The nurse advises her to abandon Romeo and marry as her parents wish: she rebels,—

"Ancient damnation! O most wicked fiend!"
. . . . . .
Go, counsellor:
Thou and my bosom henceforth shall be twain,
I'll to the friar to know his remedy;
If all else fail, myself have power to die."

Our own is the age of the revolt of youth and love against parental and clerical error and stupidity, and in America, at least, no reading of this play is likely to command much respect which, like that of Gervinus, regards the friar's point of view

as the true one or, like that of Dowden, prates of the nobility of dying for love. If this scene suggests any rational lesson it is that all in authority need to study the moods, instincts, and aspirations of adolescents and to learn how love can best be made free and in what sense nature is wiser than priest or philosopher. All the good books on Shakespeare that lay the fault for this tragedy upon any cause but ignorance of adolescence are mere prejudiced pleadings for the authority of pompous conventional stupidity, and merit small reverence.

In *Act IV* Juliet tells her trouble to the friar. Her words have the solemnity of truth of a high order:

> "God joined my heart and Romeo's, thou our hands:"

Rather than be inconstant she will slay herself. Love is her religion, she sees in it an act of God, and will seal her faith with her blood. Is not this the normal natural "conversion of adolescence?" Then follows the friar's device for pretending Juliet is dead.

The readiness with which Juliet and the priest deceive her parents seems as justifiable as the deceptions which are daily practiced upon children and upon the mentally defective. In the second scene she promises her parents to marry Paris. In the third, after a monologue which is a terrible revelation of the mental trouble that unfortunate children suffer through unwise treatment, she drinks the vial given her by the priest.

The fourth scene gives a glimpse of the preparations for the gluttonous marriage feast. Many times throughout the play the poet suggests the idea of a luxurious pantry to feed the fires of love and war in this mansion of high living and no thinking.

In the fifth scene all learn of the death of Juliet. The grief is as unrestrained as all the other passions have been. The priest who knows that Juliet is in a trance utters a number of platitudes about heaven as the best consolation for the grief that comes from ignorance of earth.

In the first scene of the fifth act we find Romeo alone with his servant at Mantua. He seems older and much developed by sorrow and self-reliance. He is in bright spirits and looks for good news, but this healthy cheerfulness of youth must be a presentiment of happiness in some better world than this for he immediately hears of Juliet's death. He at once resolves to join her.

In the second scene we learn that the message to Romeo had not been delivered The third scene ends this strange eventful history.

Romeo finding Paris at the tomb of Juliet quarrels with and

kills him and then remembering he had also loved Juliet pronounces his true epitaph :

> "One writ with me in sour misfortune's book :"

for Paris is as much a victim of the general cause of the catastrophe as the others.

This mad Romeo now prepares for death, and like a true son of nature he dies bravely, and as drinking a toast to his bride:

> " Thou desperate pilot, now at once run on
> The dashing rocks thy sea-sick weary bark !
> Here 's to my love ! O true apothecary !
> Thy drugs are quick. Thus with a kiss I die."

This scene, which has warmed many legions of true hearts, is all that Dowden says, but its truest import is not in the wretched literary sentimentality he admires, but in its powerful incentive to find a remedy for the slaughter of innocents of which this is merely a suggestion, as the histories of crime and suicide, and the records of psychiatry, and the unwritten records of weakness and despair, may serve to remind us.

Finding Romeo dead Juliet kills herself with his dagger.

> " We see the ground whereon these woes do lie ;
> But the true ground of all these piteous woes
> We cannot without circumstance descry."

So pass away these " poor sacrifices of our enmity," " for never was a story of more woe than this of Juliet and her Romeo."

We have outlived the idea that Shakespeare wrote plays as parsons write sermons, in order to point a moral or illustrate some " central idea " of a speculative ethical sort. Yet it is not impossible nor improbable that the real unity of this piece, which is that of a story told to please by its harmony and unity of effect, involves some sort of ethical unity which might by some sort of chemistry be crystallized and separated from the warm currents in which it now flows in vital solution. I do not claim, nor even believe, that Shakespeare had in mind any theory of the need of studying the claims of love and natural instinct in adolescence, but after studying every scene of the play in the light of this thesis it seems to me that this idea does in some way and without straining, go a long way toward offering a cold intellectual schema corresponding to the inexhaustible concrete richness of the story itself.

However this may be there can be no violence offered to the extremest doctrine of art for art's sake, much less to the necessary freedom of the dramatist in holding the mirror up to nature, in our treating this play as the greatest symbol of the *problem* of adolescence. It is distinctly not a solution of that

problem. Like the earlier Socratic dialogues of Plato it is a work of inquiry and not of solution. When we want to know what the problem of adolescence is, what its essential features are in normal cases, where the evils lie, and where, accordingly, the remedies must be applied, we can hardly do so more movingly and vividly than by reading over and over this tale of ancient suffering. The great beauty of character of Romeo and Juliet, the warm passionate hearts of all their friends and relatives, the great goodness of Friar Laurence, the beauty and charm of the patrician manners and conventions of Verona, the happy contented service of the domestics, the natural loveliness of the Italian summer nights, all tend only to make us ponder more deeply upon the unspeakably pitiful fate of all concerned, and to meditate upon the futility of any culture that is not founded upon science, and above all upon a scientific knowledge of the source of all human greatness, namely, the heart of youth.

III. Hamlet and Ophelia.

There is a general concensus among students of Shakespearean chronology to the effect that *Romeo and Juliet* was written when the dramatist was between twenty-seven and twenty-nine. The date of the first writing of *Hamlet* is likely to remain uncertain, but in the form in which we know it it is thought to have been written about 1603, when Shakespeare was nearly forty. Whatever the true dates may be there can be no doubt that *Hamlet* marks a much more mature stage in the poet's knowledge of adolescence than *Romeo and Juliet*. As we have seen in the preceding chapter the earlier play merely states the problem of adolescence, portrays the immense and furious activity and sensibility of the seats of emotional response in that period, and presents a touching and moving poetical appeal for wise counsel and guidance as a preventive of tragedy. In *Hamlet* the poet begins as it were (though always poetically and never as a conscious psychologist) to probe deeper, and to endeavor to answer his own question. Hamlet is the greatest adolescent type in any literature; his psychical and sexual troubles have moved the western world to the heart. His terrible misgivings, his insanity, his loss of the power of loving, his deep introspective perplexity, and, finally, in spite of the sweetness, intellectuality and moral idealism of his nature, his utter collapse, impotence and death have brought home the motives of pity and fear with a more searching cathartic agency than any other single work of art.

It is only from the point of view of adolescence and its wisest handling that we purpose reviewing this work, and it is, therefore, necessary to give reasons for calling Hamlet an adolescent at all. There is no direct evidence of the age of Romeo.

That he is a typical adolescent, in love with a girl of fourteen, and showing all the characteristics of the first bloom of youth needs no proof. Some have believed he was as old as twenty-five, on the general ground that Shakespeare always regards men of that age as in early youth, but the general impression seems to be that he is nearer eighteen.[1] On the other hand in *Hamlet* there is direct and much indirect evidence of age, but no agreement as to what the poet's intention really was.[2] There are three clearly distinguishable opinions among the critics as to Hamlet's age: (1) that he was very young, say between seventeen and twenty-one; (2) That he was exactly thirty, as distinctly stated in Act V, Sc. 1 (about line 150), and (3) that he was about twenty in the beginning of the play, and thirty at the end. This third view does not involve the theory that the action of the play covers ten years, but merely that Shakespeare by the trick of juggling with time (in which as we know from *Othello* and *The Merchant of Venice* and other plays he was a master of incredible skill and subtlety)[3] has blinded us to the inconsistency and succeeded in accomplishing the complete development of a character from early to late adolescence by the shrewd use of a plot covering a few days, and acted without a suspicion of improbability in a few hours.

Minto (*The Examiner*, 6 March, 1875), has shown the extreme improbability that Hamlet would have been at the university at the age of thirty, in an age when noblemen left the university before twenty. Equally important are the numerous allusions to his youth, though these are not inconsistent with a greater age than Minto allows if we remember how natures like Hamlet's retain the character of immaturity and boyishness. The fact that Hamlet's mother, Gertrude, inspires the king with such a passion as Hamlet rails against, and the fact that Ophelia is apparently Hamlet's first love, strongly antagonize the view that he is thirty years of age when the play opens. Without expressing more than a strong leaning toward the view expressed by Furnivall,[4] one might say that such phrases as

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[1] For a clear discussion of this see *The Academy*, 25 Dec., 1875, Art. by Dowden.

[2] The best single discussion of this is in Furness's Variorum *Hamlet*, Vol. I, pp. 391-394.

[3] In *Othello* by the use of "double time" he has made a married life of a couple of days seem to the spectator and reader to cover months; in *The Merchant of Venice* it took several ages of critics to discover that a three month's bond elapsed in a few days, so artfully were the allusions to the passing of time insinuated.

[4] "When Shakespeare began the play he conceived Hamlet as quite a young man. But as the play grew, as greater weight of reflection of insight into character, of knowledge, of life, etc., were wanted, Shakespeare necessarily and naturally made Hamlet a formed man."

"young Hamlet," as "a violet in the youth of primary nature" in the characterization of his youthful passion, and the many similar allusions to his own youthfulness and that of his contemporaries "young Laertes" and "young Fortinbras," fully settle the fact that he is an adolescent. But if there were not all this mass of evidence there would be yet nothing in the fact that he was thirty to clash with the idea of this study, inasmuch as in minds of the æsthetic-philosophic type thirty is precisely the most trying time, the age at which the transition from *juvenis* to *vir* was known by the ancients to be most crucial and definitive. His character is just forming.

The *milieu* is of the greatest importance in studying the education of Hamlet: in fact, his *milieu is* his education, if we use the latter word in its broad and true sense. The formative influences emphasized by Shakespeare are (1) The prince's father, (2) his mother, (3) the Court-life at Elsinore, (4) the University, (5) the Theatre, (6) Horatio. The enumeration of these suggests an antithesis to the *milieu* of Romeo, his parents, the grace and luxury of Verona, the friar, Mercutio. Here we are dealing with a youth whose surroundings have done much to irradiate his vitality into thought, who has in fact a great passion for abstract ideas and moral issues, and who has an intellectual earnestness and a broad outlook very strongly contrasting with Romeo's boyish preoccupation with pleasure and ignorance of affairs.

(1) There is in Hamlet a strong desire for guidance. His memory of his father is a beacon and a religion. There is a pathetic tone in his praise of his father as an ideal of manhood, "I shall not look upon his like again." It is the lament over his inability to harden into manhood, into virile character, an unconscious feeling of his invincible plasticity, incapacity for *setting*, that makes him think of his father as he does: "so excellent a king," "so loving to my mother," "my father's brother, but no more like my father than I to Hercules," "my father's spirit in arms! all is not well." (2) But here the advantage over Romeo in the matter of parents ends. Hamlet is torn between two opposite hereditary tendencies. When he thinks of her marriage his stomach turns:

> "O God! O God!
> How weary, stale, flat, and unprofitable,
> Seem to me all the uses of this world!"

He associates his mother with "things rank and gross in nature:" "a beast that wants discourse of reason would have mourned longer." This feeling culminates in Act III, sc. 4. Here as nowhere do we see his opinion of the source of that "dram of eale" which poisoned his life and destroyed the pos-

sibility of health and peace. His arraignment of his mother's shamelessness has no superior in Shakespeare as a piece of trenchant and soul-searching expression.

> "Repent what 's past; avoid what is to come;
> And do not spread the compost on the weeds
> To make them ranker."

(3–5) It has often been said that Hamlet is Shakespeare, but this crude piece of amateurish psychology or psychognosis overlooks the main factor in the diagnosis of Hamlet's disease, namely, that *he lacked expression*. Shakespeare possessed precisely the greatest gift of expression short of positive action that the world has ever seen, while Hamlet, brought up in the rude Court of Elsinore, and untrained in the technique of any art, frets his soul to death ranting about poetry and theaters to imbeciles like Polonius and matter-of-fact friends like Horatio. Is it possible to imagine a greater difference of opportunity and hence of development than that between Shakespeare in London and Hamlet at Elsinore?

Not that art, even the drama itself, would have thoroughly *sanified* Hamlet: the highest art impulses were surging in him it is true, but, as Aristotle pointed out, the highest art does not form works of art but moulds states, and creates a second and better world. Shakespeare may have suffered from insufficient play for his faculties and may have withered early from the inability of dramatic expression to let out of him all the energy that nature poured into him, but what must have been the psychic condition of a Shakespeare unable to meet artists, to learn to make himself felt, in a word to find a motor outlet for the vast ceaseless influx of sensations and ideas of his miraculous sensibility and voracious acquisitiveness. He would undoubtedly have been the most melancholy and discontented of men.

One might say that the book of Hamlet's psychology begins with his vast sensibility, and proceeds through incomparable intellectual and emotional chapters to the beginning of volition and action and is there torn off. The proof of this has not been weighed in the light of modern psychology. Read this speech in relation to the latest views on habit:

> "That monster, custom, who all sense doth eat,
> Of habits devil, is angel yet in this,
> That to the use of actions fair and good
> He likewise gives a frock or livery
> That aptly is put on. Refrain to-night;
> And that shall lend a kind of easiness
> To the next abstinence: the next more easy;
> For use almost can change the stamp of nature,
> And master the devil or throw him out
> With wondrous potency."

Compare James's well-known laws concerning the starting and the continuance of good habits.

Perhaps James's harsh judgment of Rousseau, where he says (Vol. I, p. 125), "There is no more contemptible type of human character than that of the nerveless sentimentalist and dreamer, who spends his life in a weltering sea of sensibility and emotion, but who never does a manly concrete deed," could not get a greater rebuke than it gets from Shakespeare's Hamlet, a character utterly unable to do a "manly concrete deed," and always floundering in a sea of sensibility, yet more dignified, more sincere and aspiring than most virile characters. It is clear that Hamlet pondered on *habit* as deeply as Prof. James, though he has none of the "contemptible" traits of Rousseau, and it seems quite clear that incapacity for manly action and a surplus of feeling may occur in great characters, and hence that the contempt which it is so easy to fling at the great Rousseau should not be levelled at his fine feelings but at something else. This preaching against the inefficiency of the Hamlet-nature and the tendency to make the *results* of ignorance appear the *cause* of weakness are merely our unconscious self-defence of ignorant pedagogy, and analogous to the antics of a mother who whips her child for her own faults. We must not any longer say that men like Rousseau are contemptible because they are sinful, but we must say that they have not been perfect because we have not understood how to rear them, and for the rest we must wonder at the inherent virtue by which they saved and irradiated so much from sensuality and oblivion.

But the finest proof, perhaps, of Hamlet's psychological gift, and one never quoted, so far as I know, is the speech of the Play King (III, 2, 200), though it is not certain, of course, that these are the lines inserted by Hamlet. For a profounder psychological philosophy one might search the works of the period in vain. The Play Queen has just been protesting that she will never forget her dying husband: he replies:

> "I do believe you think what now you speak;
> But what we do determine oft we break,
> Purpose is but the slave to memory,
> Of violent birth but poor validity;
> Which now like fruit unripe sticks on the tree,
> But fall unshaken when they mellow be.
> Most necessary 'tis that we forget
> To pay ourselves what to ourselves is debt;
> What to ourselves in passion we propose,
> The passion ending, doth the purpose lose.
> The violence of either grief or joy
> Their own enactures with themselves destroy;
> Where joy most revels, grief doth most lament,
> Grief joys, joy grieves, on slender accident.

> This world is not for aye, nor 't is not strange,
> That even our love should with our fortune change;
> For 't is a question left us yet to prove
> Whether love lead fortune or else fortune love.
> The great man down, you mark his favorite flies;
> The poor advanced, makes friends of enemies.
> And hitherto doth love on fortune tend,
> For who not needs shall never lack a friend;
> And who in want a hollow friend doth try,
> Directly seasons him his enemy.
> But orderly to end where I begun,
> Our wills and fates do so contrary run,
> That our devices still are overthrown,
> Our thoughts are ours, their ends none of our own."

Whether actually written by Hamlet or not this is Hamlet's *Weltanschauung* and a more perfect example of brilliant compact philosophical exposition is far to seek. The masterly ease with which the relations of love and fate are set forth, the sure grasp upon love as the essence of will, and of joy, and grief, and memory, and accident, as the elements of fate, the central thought that we are in a transition stage and that it is not yet settled whether we are to control fate or fate us, the anticipation of the great *aperçu* of Leibnitz that our thoughts are free however little our conduct may as yet agree with them, and perhaps above all the idea that good purpose, or loving will, however frustrated by accident, weakness and ignorance, is the thing that reason can depend on, all mark this as a passage of the highest order of thought. *It is a passage that grows and grows with study* and reminds us of the verdict of Coleridge after forty years of study of Shakespeare, that the plays become hackneyed only to the unprogressive. These and similar passages make one wonder whether the "mere phrasemaker" theory of Shakespeare goes very far. He who created Hamlet was he not a philosopher? One would say that if he had memorized this one quotation and thought about it often he must have had a complete little system of his own, for it is an abstract of the whole world.

We may assume that Hamlet had got his turn for philosophizing from the university, and as he is represented as fond of books and poetry, we infer that he had taken a lively interest in the culture of the age. His great skill in fencing proves that manual exercise was not neglected, his shortness of breath perhaps points to his tendency to neglect sufficient bodily activity. (For proof that he was fat see Furness' *Hamlet* I, p. 446.) His dislike of drinking and carousals is strongly indicated.

(6) In Horatio, Hamlet has a friend as opposite as possible to Mercutio. He is a solid, common-sense man of perfect sincerity and honor, just a type of a certain Teutonic or Anglo-

Saxon character known as absolutely reliable. Horatio is almost oppressively sane, and his love for Hamlet is the more impressive on this account. He does not condemn the emotional temperament because of its hysteria and inefficiency: he sees that Hamlet is overloaded with hereditary energy and being unable to help him on the high philosophical and psychological planes he offers him his good sense and his strong, quiet sympathy. This, like many other features of the play, may well be taken as of deep pedagogic suggestiveness. As before, Shakespeare is unable to save his hero, but he is at least making here a new set of conditions and not merely depicting the worst possible treatment of adolescence.

If any further proof of Hamlet's essential youth were needed, it might be found in the paradoxical nature of his whole make-up. Physically he is fat and inclined to a sedentary life of moody, brooding thought; but he has such gifts as a swordsman that he is more than a match for the best of the time; and Fortinbras who is nothing if not a man of action, and who indeed serves the artistic purpose of a foil to Hamlet in this particular, expresses the view that Hamlet was potentially a soldier like his warlike father. Morally Hamlet is the soul of a certain exalted purity and refinement; nothing offends him more than debauchery or vulgarity, yet in his mood he makes obscene witticisms, and it is difficult to believe that all his relations toward Ophelia agree with his better self. It would seem that his harsh treatment of her ("Get thee to a nunnery!") had perhaps been caused by a revolt of his moral nature. Then Hamlet harbored in his mind a guilty secret, which forced him by every subtlety of word and deed to avoid the subject nearest his heart and life. The guilt is in no way his, but a legacy from an unfortunate father, murdered by an egoistic uncle. This dark and inarticulate apperception mass, like a lesion in his brain, lies in his mind unabsorbed, unrelated and oppressive; it is a pestilent region which every open act must avoid, and every wholesome thought must skirt round. This inheritance of unnatural secrecy is the type of adolescent woe, and the fertile cause of morbid self-consciousness, inaction, and insane paradox. The need of perfect candor and of freedom to follow the brain-paths that lead to simple truth, as a condition of moral and physical health, is exemplified by a comparison of Hamlet with characters like the boys of *Cymbeline*.

Intellectually he is an amazing paradox. This has been universally recognized in the discussion of his sanity. But the strange contradictoriness of his mind shows in other ways too. He is a mixture of fancy and acute reasoning, a ghost-seer and a keen logician, a thinker of the broadest, deepest thoughts, and a wit-snapper for whom no petty point is too trivial, no

subtlety of phrase too fine. Emotionally this antithetical quality is even more marked; gay almost to madness one moment, he is again so melancholy that he seems to bear the sins of the world; one time deliberative to tediousness, another he is rash enough to assassinate Polonius; deeply and touchingly in love with Ophelia he is also by turns filled with an aversion for her which makes the world seem dead and worthless. Most of the questions raised by the critics of his character would be best settled by saying that he is both this and that, sane and insane, in love and not in love, young and old, boyish and manly, weak and strong, good and reprehensible, for Hamlet is precisely the clamor for a solution of the paradox of adolescence by virtue of which one frail soul can be rent and stretched by all the opposing tendencies that heredity and a formless helter-skelter education of chance impressions and unharmonized thoughts, feelings and imitations can curse a human being with, and especially a character of great sensibility, courtesy and many-sidedness.

Theodor Vischer and Türck and Kuno Fischer have rendered a great service to Hamlet criticism by showing that Hamlet is a "*Phantasiemensch.*" But no one has related this idea to his adolescence. *Every adolescent is a "Phantasiemensch,"* and it is only because Hamlet happens to be so greatly gifted and so inclined to speculation that the trait seems so exaggerated. Critics who know Hamlet through the stage representations of Booth and Irving, especially in their later years, may find it hard to class him with Romeo, but in reality he should be played in the first scene in which he appears as a charming young prince just home from school, with a young graduate's or rather undergraduate's charming idealism and boyish turn for metaphysics and melancholy, and graceful moods and manners; he impresses one as a newly-made Baccalaureus in Artibus impresses a business-man, who knows that he will never do much in this world till he has locked away his hood and sheepskin. Werder, following the lamented Klein, has argued that Goethe was all wrong in holding that Hamlet was a dreamer incapable of action thrown suddenly into a situation which demanded the motor energy of an Alexander or Napoleon. Werder says that Hamlet was perfectly fitted for action, ready to act all the time, but that the circumstances were precisely such that action would have been mad, futile, impossible. If Hamlet *had* killed the king, says Werder, people would have asked the cause; if he had replied that a ghost had told him that Claudius had murdered his father, they would have said Hamlet was a madman, or a brutal and deceitful murderer, and Hamlet's nature was so refined that he could take no revenge which did not offer a moral vindication as well as a crown.

It seems that Werder has made a real contribution in showing Hamlet's native capacity for action, and in rebuking the critics who think he should have assassinated Claudius, but if Hamlet had not been what Goethe says, it seems probable that either he would not have *seen* things as all hopelessly settled by fate, or that he would have found some other way of ridding the world of his tyrannical uncle. If this is the truth about him, it suggests the danger of shipwreck that threatens those adolescents who are turned loose upon the world from universities where they get only the vaguest and most unpractical views of the ethical situations that are sure to test them immediately.

Hamlet's character is as full as Romeo's of the traits of adolescence, but they are very different types. Hamlet has a broader outlook, he is of those who seem travelled and cosmopolitan even before they have really had much experience, he is interested in larger questions, and is much more altruistic than Romeo. Observe the kindly way in which he treats the players, his thoughtfulness for others, his contempt for the petty narrowness of Osric. His deep religious tone, too, is a character of certain phases of imagination found frequently in extreme forms among insane adolescents. His deep pondering over suicide, his powerful impulse toward art which does not, however, lead him to cultivate any definite form of expression, his lecturing his mother in spite of his own weaknesses, his morbid interest in the skull of Yorick, and his uncanny philosophizing about death, his wild raving and crazy impotence in the grave-scene after the recognition of Laertes, his feeling that the time is out of joint, and that *he* was born to set it right, these and similar points are of more than passing significance in the study of an over-intellectual adolescent, and the play might almost offer an ethological scheme for the analysis of that type, so thorough and natural is its synthesis of the really important elements of this most puzzling character.

The character of Ophelia is that of an adolescent who becomes insane and drowns herself on account of trouble arising from an unhappy love-affair. The hint for her character may have been got either directly or indirectly from the old story told by Saxo Grammaticus, and, again, by Belleforest, and called "The Hystorie of Hamblet." There is a point in the second chapter of this tale which must be of interest to our present study, and that is that in this old tale when Hamlet feigns madness in order to save himself from his uncle, the means taken to test his madness is that he is tempted, through the machinations of the king's party, by "a fair and beautiful woman in a secret place," and his obstinacy is taken to prove that he really is mad. (This can be found in full on pages 95

and 96 of Furness's *Hamlet*, Vol. II.) The puzzling character of the prince must have been a challenge to the ingenuity of Shakespeare. It has been thought by some that Ophelia's character was suggested by that of the beautiful woman who tempted him at the king's command.

Tieck says, "How much of fine observation is there in what is said of Ophelia in Goethe's *Wilhelm Meister!* But if I do not entirely misunderstand Shakespeare, the poet has meant to intimate throughout the piece that the poor girl, in the ardor of her passion for the fair prince, has yielded all to him. The hints and warnings of Laertes come too late. It is tender and worthy of the great poet to leave the relation of Hamlet to Ophelia, like much else in the piece, a riddle, but it is from this point of view alone that Hamlet's behavior, his bitterness, and Ophelia's suffering and madness, find connection and consistency." What Goethe had said of Ophelia was this: "Of Ophelia there cannot much be said, for a few master-strokes complete her character. Her whole being floats in sweet, ripe passion. Her inclination to the prince, to whose hand she may aspire, flows so spontaneously, the good heart obeys its impulses so unresistingly, that both father and brother are in fear,—both warn her directly and harshly. Decorum, like the thin lawn upon her bosom, cannot hide the movement of her heart; it is rather the betrayer of this light movement. Her fancy is touched, her still modesty breathes an amiable longing, and should the accommodating goddess opportunity shake the tree, the fruit would at once fall. And then, when she sees herself forsaken, cast off, and despised; when in the soul of her crazed lover the highest has changed to the lowest, and instead of the sweet cup of love, he offers her the bitter cup of woe, her heart breaks; the whole structure of her being is loosened from its joinings, her father's death breaks fiercely in, and the beautiful edifice falls into a ruin."

Again, in speaking of the lewd songs which Ophelia sings in her madness, he says: "Should not the poet have furnished Ophelia, the insane maiden, with another sort of songs? Could not one select out of melancholy ballads? What have double meanings and lascivious insipidities to do in the mouth of this noble maiden? In these singularities, in this apparent impropriety, there lies a deep sense. Do we not know from the very first what the mind of the good child was busy with? Silently she lived within herself, scarcely concealing, however, her longing, her wishes. Secretly the tones of desire were ringing in her soul, and how often may she have endeavored, like an unwise nurse, to sing her senses to sleep with songs which only kept them more wide awake? At last, when all command of herself is taken away from her, when her heart

hovers upon her tongue, her tongue turns traitress, and in the innocence of insanity she solaces herself, before king and queen, with the echo of beloved, loose songs." This question is another of the paradoxes of adolescence, and may be answered equally well in either sense. In truth, Goethe's position, though it seems the opposite of Tieck's, is very close to the view that Ophelia is good whether or not her manifest and natural desire became an act of volition. It is on the whole, perhaps, the most gentle and manly view, and argues that Goethe's incomparable critical wisdom has really interpreted Shakespeare's position. The more positive declarations of her innocence on the part of Mrs. Jameson and many English critics, leave the impression that the mere suggestion that Tieck's view is correct would destroy one's whole interest and sympathy in the heroine; but this opinion, however conventionally useful, hardly agrees with the expressions of the father and brother, or with the conversation with Hamlet at the play, or the songs so much more probably explained by Goethe than by Mrs. Jameson (who says they were songs with which she had been sung asleep by her nurse). Tieck's view is that of an able critic who wishes to "settle" the matter. The genius of Shakespeare (recognized by Goethe) shows itself in leaving the trouble of adolescence in Ophelia's case, as in Hamlet's, a *secret* cancer of the mind.

Ophelia's charm is seldom caught in a stage representation. It is that of a refined girl of the upper middle class with a very poetical hero-worshipping nature, full of sweet impulses, responsive to the slightest suggestions, a being all sensibility, passion, tenderness, easily led by affection, but not hysterical or chlorotic so long as circumstances are favorable. Because of her ardent idealizing nature she is defenceless against Hamlet, in whom she sees "a noble mind," "the courtier's, soldier's, scholar's, eye, tongue, sword, the expectancy and rose of the fair state, the glass of fashion, and the mould of form," "that unmatched form and beauty of blown youth," all in a word that the best women encourage and desire a man to be. She has, as she says, "sucked the honey music of his vows," and is devoted to him alone. Speaking generally, we may say that Ophelia is for a woman what Hamlet is for a man. Both are of the type of intellectual adolescence in whom love is very largely a matter of moral and emotional sympathy, and relatively less a matter of sense. But Ophelia is represented as a girl of her time should be, not versed in books, and therefore not fitted to be Hamlet's companion in intellectual pleasure, and this accounts largely for the fact that the moment Hamlet's normal easy-going joyousness is destroyed by his father's secret, there is nothing left between him and Ophelia

except the memory of certain love passages, which, having lost their sweetness, only produce disgust. Had Ophelia in this crisis developed a power of appreciating her lover's mental struggles their love would have been bound closer by adversity, but while he becomes a student of fate and the divinity which shapes our ends, she remains a sweet and helpless child, and leaves him to soliloquize. This, too, is a problem for pedagogy, and one that coeducation, even in its present imperfection, has largely answered. We shall see that Shakespeare was deeply interested in this large class of the very best kind of girls, and that he came to very definite conclusions as to how they might be saved from weakness, insanity and suicide.

If we look upon Hamlet as an adolescent product of the scholastic method of education, which developed a great love of reading, thinking, pondering, speculating, and of the Wittenberg theatre, where he had acquired an equal capacity for feeling, brooding and sentimentalizing, we may say that Shakespeare, though quite guiltless of the ambitions of a Pestalozzi, was the first to divine that any pedagogy which develops thought and feeling without developing a practical outlet for this inner activity is likely to end in weakness, misery and tragedy. In Hamlet the circuit of thought and emotion is never closed; there is a constant overflow of the current of life, a streaming off at loose ends, and a complete incapacity for work or productiveness. Hamlet is not merely allowed to *grow* without any means of culture or guidance, like Romeo. But the method, though elaborate, is bad, and its only merit is that it makes a beginning.

IV.

"I cannot say 't is pity
She lacks instructions, for she seems a mistress
To most that teach."

—Winter's Tale, IV, 3.

Perdita and the Children of Cymbeline.

Professor Georg Brandes fancies that in *The Winter's Tale* he detects a fatherly tone in Shakespeare's treatment of youth. The plays to be dealt with in this section were written in his last period and within about six years of his death. Most critics are now agreed that in this last group the poet reveals a deeper insight than even in his great tragic period. One might almost say that he has grown somewhat conscious of having a philosophy and that his interest in stage matters if not in the drama is slightly less, while his turn for brooding on the world as a great riddle has gained proportionately. Still it must be maintained that we know him only as a *poetical* philosopher and that in interpreting his thought we are as much

as ever in need of warning against mere subjective imputation. Setting all speculation, then, aside, and regarding only the characters as we find them, we observe a great change in his point of view. Instead of the catastrophes of adolescence that mark all his earlier serious studies we now come to a group of four plays—*The Winter's Tale*, *Cymbeline*, *The Tempest*, and *The Two Noble Kinsmen* (in part), all of the utmost seriousness and depth of content, yet all ending happily. How are the adolescents of these four plays educated, what is their environment, how are they suggestive pedagogically?

Ferdinand, Miranda, Imogen, Guiderius, Arviragus, Perdita, Palamon, and Arcite are the eight adolescents in Shakespeare's plays who seem to suggest the best poetical solution of the problems raised by *Romeo and Juliet* and not solved by *Hamlet*. The sons of Cymbeline, and The Two Noble Kinsmen, whom Shakespeare borrowed from the so-called Iliad of the Middle Ages, Chaucer's *Knight's Tale*, are the first products after the Renascence of the perfect youths of the Greek drama and the Greek sculpture.

The note of these plays is that of a new Hellenism which has not rejected but absorbed and transcended the Christian ideals. These youths are Greek, but they are far more than Greek. The best criticism of them is found in the words of Belarius, which deserve to be better known:

> "O thou goddess!
> Thou divine Nature, how thyself thou blazon'st
> In these two princely boys. They are as gentle
> As zephyrs, blowing below the violet,
> Not wagging his sweet head; and yet as rough,
> Their royal blood enchafed, as the rud'st wind,
> That by the top doth take the mountain pine,
> And make him stoop to the vale. 'T is wonder
> That an invisible instinct should frame them
> To royalty unlearned, honor untaught,
> Civility not seen from other, valor
> That wildly grows in them, but yields a crop
> As if it had been sowed!"

We shall see again the environment in which these youths are reared.

Nearly all that we know of Perdita is found in Act IV, scene 3, of the *Winter's Tale*. Immediately after birth she had been exposed with a bundle of treasure to commend her to kindness upon a sea coast remote from her home. She is found by an old shepherd and his son. The old man enters first, railing at some mad youths who had scared away his sheep by their hunting:

"I would there were no age between sixteen and three-and-twenty, or that youth would sleep out the rest; for there is noth-

ing in the between but getting wenches with child, wronging the ancientry, stealing, fighting. Hark you now! would any but the boiled brains of nineteen and two-and-twenty hunt this weather?"

We are distinctly told in the prologue to Act IV that Perdita is sixteen when the story is resumed. Meanwhile she has lived among simple, honest rustics, perfectly good-hearted, natural and unsophisticated.

The heredity of Perdita is noteworthy. Leontes is described as a king of great ability and of deep feeling, whose character is marred by a strange and terrible fit of jealousy in which he utterly wrecks his domestic happiness. Hermione is the greatest woman in English literature, and is taken to represent Shakespeare's ideal of motherhood and womanhood.

When Polixenes has studied Perdita he concludes,

> "Nothing she does or seems
> But smacks of something greater than herself."

This is a remarkable subtlety of psychological analysis, for Perdita, though a child of nature, shows a mind of so high an organization that her most naïve remarks have a sort of sublimated mythical suggestiveness. This appears in her discussion of cultivated flowers as contrasted with those of nature's make.

The "streaked gillyvors" do not grow in the shepherd's garden, some call them "nature's bastards," and "I care not to get slips of them," because "I have heard there is an art which in their piedness shares with great creating nature."

To this Polixenes replies that nature is the cause of all things, and hence of this very art to which she objects. "So it is," she replies simply. But when he urges her then to make her garden rich in gillyvors and not to call them bastards, she replies,

> "I 'll not put
> The dibble in earth to set one slip of them;
> No more than, were I painted, I would wish
> This youth [her lover] should say, 't were well, and only therefore
> Desire to breed by me."

Perdita is no emblem of a return to nature, she is rather a discovery of nature, a suggestion of a second and better nature, a return to simplicity, and an abandonment of the arts of progress in the enjoyment of their results. Hermione was all duty and nobility and charity. Perdita is above these notions, though capable of them on occasion. Her language concerning love shows an amazing boldness, the innocence of a naked infant. She wishes flowers to strew her lover o'er and o'er:

> Florizel. "What! like a corse?"
> Perdita. "No, like a bank for love to lie and play on;

Not like a corse ; or if,—not to be buried,
But quick and in my arms. Come take your flowers :—"
etc., etc.

The quickness with which she passes on, shows the free relation of her thoughts of love to the rest of her clear association complexes ; *there is here no secret isolation of the core of the adolescent mind from its outward parts* such as we now regard as the perfection of modesty and the guarantee of psychic health; these pretty speeches are uttered before Polixines and Camillo, and are part of the reason why that sovereign desires her for a daughter-in-law.

In *Cymbeline* the two princes are stolen from the court and brought up in the mountains of Wales by the good old banished Lord Belarius.

In Act III, scene 3, we see them entering from the cave where they live. The old man addresses them a few words as they go out to hunt:

" A goodly day not to keep house, with such
Whose roof 's as low as ours ! Stoop, boys ; this gate
Instructs you how to adore the heavens, and bows you
To a morning's holy office ; the gates of monarchs
Are arched so high that giants may jet through
And keep their impious turbans on, without
Good-morrow to the sun. Hail, thou fair heaven !
We house in the rock, yet use thee not so hardly
As prouder livers do."

Guiderius. " Hail, heaven !"
Arviragus. " Hail, Heaven !"

This is one of the most poetical and profound of the passages of even this play. One feels that the sun is a god, and that the myth-makers were right. It would seem that Shakespeare had guessed the deepest secrets of pedagogy, and would form these youths on a solid basis of natural religion and manly sport. As the scene proceeds we see their craving for social life as they outgrow their early tribal instincts.

Perhaps we get nearest to the poetic philosophy of education in the notion of using natural objects as symbols of ideas. Belarius says,

" Now for our mountain sport. Up to yond hill
. . . . . Consider
When you above perceive me like a crow
That it is place which lessens and sets off . . .
This service is not service, so being done,
But being so allowed ; to apprehend thus
Draws us a profit from all things we see. ."

This doctrine is a development of the earlier notion (*As You Like It*) of " sermons in stones, books in the running brooks." Wordsworth is an example of what the book of nature can do

in giving psychic health even where physical robustness is wanting.

In Act III, scene 6, the two boys meet their unknown sister in the disguise of a boy, and immediately feel for her that divine friendship which in such natures rivals love itself. We here learn that Fidele, the adored of all poets, artists and critics, though reared in a palace, is as true a child of nature as her brothers. In them she finds her ideals of what men should be;

> " Great men
> That had a court no bigger than this cave
> That did attend themselves and had the virtue
> Which their own conscience seal'd them,—laying by
> That nothing-gift of differing multitudes,—
> Could not outpeer these twain."

No one who studies the second scene of Act IV will believe that Shakespeare had anything to learn of Rousseau in regard to the relation of education and conventional society to nature. In these lines we hear the first murmur of the storm of 1640-50, when the first great blow for political liberty was struck by Hampden, Eliot, Cromwell and their friends, and when New England was founded. The storm broke only thirty years after this scene was conceived. Arviragus asks,

> " Are we not brothers ?"
> Imogen. " So man to man should be,
> But clay and clay differs in dignity
> Whose dust is both alike."

Later she says,

> " These are kind creatures.
> Gods, what lies I have heard !
> Our courtiers say all 's savage but at court."

The close relation of democratic instincts to free, natural education is so brought out here as to make all falsely natural systems seem pale and bloodless. We have seen how kind and tender the brothers are. Now Cloten, the tyrannical heir-apparent enters, and spying Guiderius alone says,

> " Soft ! what are you
> That ply me thus ? some villain mountaineers ?
> I have heard of such. What slave art thou ?"
>
> Guiderius. " A thing
> More slavish did I ne'er than answering
> A ' slave ' without a knock."
>
> Cloten. " Thou art a robber,
> A law-breaker, a villain. Yield thee, thief."
>
> Guiderius. " To who ? to thee? what art thou ?
> Have not I
> An arm as big as thine ? A heart as big ?

> Thy words, I grant, are bigger, for I wear not
> My dagger in my mouth. Say what thou art,
> Why I should yield to thee."

Neither his clothes, nor his name, nor his title impress the boy. On hearing that he is the queen's son he replies, "I am sorry for it, not seeming so worthy as thy birth;" and, finally, in a true maxim of freedom,

> "Those that I reverence those I fear, the wise;
> At fools I laugh, not fear them."

True education and true freedom go together, and Cloten's death is a symbol of enlightened liberty.

In this same scene is found that dirge over Fidele which touchingly expresses grief for the dead in the terms of a sublime human and natural religion:

> "Thou thy worldly task hast done,
> Home art gone, and ta'en thy wages;
> Golden lads and girls all must,
> As chimney-sweepers, come to dust."

In the last act there is an unusual degree of mysticism:

> "'T is still a dream, or else such stuff as madmen
> Tongue and brain not; either both or nothing;
> Or senseless speaking, or a speaking such
> As sense cannot untie. Be what it is,
> The action of my life is like it, which
> I 'll keep if but for sympathy."

Any one who revels in symbolism of a suggestive psychological kind may read as many meanings into this act as a candidate for the Sanhedrim was required to unearth in a sacred writing. But the two boys are the heroes of the fight,

> "Here are your sons again; and I must lose
> Two of the sweet'st companions in the world.
> The benediction of these covering heavens
> Fall on their heads like dew! for they are worthy
> To inlay heaven with stars."

These youths are the answer to all who speak of Shakespeare as the poet of courts and mediævalism, and to those who say that Shakespeare gave us no true heroes; they are heroes more stirring than any others, yet they seem drawn from real life, or a life remotely realizable in some very great and possible republic.

The Tempest and The Two Noble Kinsmen.

The Tempest is declared by Dowden to be an enigma. Many critics of eminence have endeavored to interpret it as allegorical. It seems probable that the philosophical air of the work

is owing to the extreme suggestiveness of the types of character involved in it and of its typical situations. While it cannot be proved that Shakespeare had no conscious didactic purpose in it, it is a gratuitous assumption that in this instance he departs from his usual artistic purpose, "which was to please." Once more setting aside this problem, which is, however, more clamorous in his latter plays, one may safely restrict the study to what his works suggest. From this point of view *The Tempest* is the greatest of his works for the student of adolescence.

The Tempest is about the last of Shakespeare's more serious efforts. Its extraordinary range of types and situations makes it the most striking of those works in which he envisages the whole world and holds the mirror up to all nature and not merely to a fragment of the social complex. In style it may be called his only Greek play. It is a mythology of the forces of human society and progress, its symmetry and proportion have no counterpart in modern literature, and it obeys the Aristotelian unities more exactly than any other Shakespearean play, but it is not Hellenic, it is neo-Hellenic, and it has absorbed the spirit of Christianity and found for it an adequate and free expression. Shelley's *New Hellas* is one of the best lights on the meaning of *The Tempest* and Renan's *Caliban* interprets much of its purport. Sir Daniel Wilson regarded Caliban as Darwin's missing link anticipated by Shakespeare and wrote a learned book thereupon. Lowell thought Caliban represented the animal instincts of a man's make-up and Ariel his fancy. Dowden and Deighton think the play is a sort of autobiography of Shakespeare in which Prospero is the poet-philosopher and Miranda his art. All these views are interesting and are given a certain plausibility, but they could be multiplied indefinitely with equal or even greater show of truth. Caliban may be a prehistoric man (Wilson), or a type of the lawless mob (Renan), or a symbol of Plato's lower man or sensual desire (Lowell). Ariel may represent the opposite end of the scale of human development, or the idealist, poet, and dreamer, or the more exalted psychological functions of fancy and creative imagination; but all we can prove is that Shakespeare calls Caliban a "deformed slave," and Ariel "an airy spirit." Ariel appears as male and female and there is little indication of sex. It so happens that in ethics there have been two great oppositions, that namely between sense and spirit, and that between egoism and benevolence; it also happens that Caliban and Ariel are perfect types of this first contrast and Antonio and Gonzalo of the second. Standing centrally between these cardinal points of the moral form of the piece is Prospero, who knows all four equally well and seems to include their qualities harmoniously in himself. Like Hamlet he has lost his king-

dom and gone in search of a philosophy, but unlike Hamlet he has discovered his philosophy and is now on the point of recovering his kingdom. Up to the time of the opening of the play Prospero has been the prey of fortune, but on the island he has acquired control over natural forces through his mastery of science and magic, and throughout the play he is complete master of every situation.

If one were to let the fancy roam as Dowden does one might suppose that Shakespeare saw in Prospero the spirit of philosophy and science which had once flourished in Greece and was deposed by militarism and false philosophy, but which in the days of Bruno, Galileo and Bacon was about to resume its reign. And it is an amusing and not quite idle employment to write "true science" for Prospero, and "egoistic rationalism" for Antonio, and "altruism" for Gonzalo, and "the ideal" for Ariel, and "primevalism" for Caliban, and "Hellas" for Milan, and "modern learning" for Prospero's Cave, and to see in the play a vast allegory of the philosophy of history and of the turmoil of the Renascence, with Gonzalo, saving his books for Prospero, as the mediæval church saved the seeds of the liberal arts of Greece. But for our present purpose it is only necessary to show that Miranda and Ferdinand are handled in a manner very suggestive to students of adolescence, and that Prospero is above all a master in the science of pedagogy which he seems to rate quite as high as his science and magic. Miranda is fifteen years old. She was three when she and her father were banished and now twelve more years have elapsed (Act I, scene II, lines 41 and 52).

The first scene in which she appears shows perhaps as fully as any in the plays, Shakespeare's deep insight into psychology. The key-note of her character is sympathy, and in his anxiety to make her a pure feminine type the poet has emphasized this characteristic somewhat to the prejudice of that abundant complexity by which he has developed most of his characters. This remark applies to all Shakespeare's women as compared with his men, but in this instance there is a marked tendency to simplify the type by reducing it to the fullest single significant term and the result is that Miranda, like the others of the play, is a somewhat allegorical, yet perfectly life-like being. She has been watching from the shore of the island the vessel in distress in the tempest: "O I have suffered with those that I saw suffer!" she exclaims, and this is the essence of her whole nature. Prospero assures her that there is no danger to those on board, and then begins with her a conversation in which his purpose is to inform her of her true rank and origin so that she may be better prepared to meet the princess whom his power has now brought to the island. A symbolist might almost be

excused for catching in these lines an echo of some second meaning, as indeed nearly all critics have done since the days of Dr. Johnson who declared the passage merely tedious. Most readers are perhaps likely to think this one of the best or one of the worst of Shakespeare's scenes, and the verdict is apt to depend upon whether or not one catches the note of universality, or, as some would say, of cosmic interest which attaches to this simple and over-significant tale.

"Canst thou remember
A time before we came unto this cell?
I do not think thou canst, for then thou wast not
Out three years old."
Miranda. "Certainly, sir, I can."
Prospero. "By what? By any other house or person?
Of anything the image tell me, that
Hath kept with thy remembrance."
Miranda. "'T is far off;
And rather like a dream than an assurance
That my remembrance warrants. Had I not
Four or five women once that tended me?"
Prospero. "Thou hadst, and more, Miranda.
But how is it
That this lives in thy mind? What seest thou else
In the dark backward and abysm of time?
If thou rememberest aught ere thou cam'st here,
How thou cam'st here, thou may'st."

Of Miranda's mother we are told only that she was "a piece of virtue." Then follows a strange tale of fraternal hatred which, like that of Cain and Abel, has a deep mythical suggestiveness which to some minds will seem almost metaphysical. It is of so extraordinary a keenness of psychological vision that, as bearing upon the character of Miranda's instruction from her father, it would bear the very closest critical analysis. Prospero tells how, as Duke of Milan, he had promoted learning and how this absorption in books had led to his fall; the "liberal arts" being all his study,

"The government I cast upon my brother,
And to my state grew stranger, being transported
And rapt in secret studies."

The brother, Antonio, then developed a subtle and crafty egoism,

"And my trust,
Like a good parent, did beget of him
A falsehood in its contrary as great
As my trust was."

Antonio then

"Like one
Who having, into truth, by telling of it,
Made such a sinner of his memory,
To credit his own lie,—he did believe
He was indeed the duke."

Then having the "outward face of royalty" he grew ambitious, levied an army and overthrew the true and natural duke. Prospero and the little girl were sent in "a rotten carcass of a boat" some leagues to sea, and would have perished utterly but for "divine Providence" in the form of the kind and benevolent old minister Gonzalo, who gave them food and clothing, and, above all, preserved the royal scholar's precious book.

It is, in a word, a tale so large and significant in its proportions that it may be felt as a myth of the human story.

Shakespeare now drags the beast Caliban from the "dark backward and abysm of time," and displays this monster in immediate contrast with Ariel. We learn how Miranda and her father had tried to educate this beast.

> "I pitied thee,
> Took pains to make thee speak, taught thee each hour
> One thing or other; when thou did'st not, savage,
> Know thine own meaning, but would'st gabble like
> A thing most brutish, I endowed thy purposes
> With words that made them known."

In this same long scene occurs the meeting of Miranda and Ferdinand. The young girl has just awoke from the deep sleep into which she had fallen. Ariel, invisible, sings and plays a magic song which the young prince follows. It is a tune of enchantment, and he is completely bewitched. He exclaims

> "This is no mortal business, nor no sound
> That the earth owes:—I hear it now above me."

It might be taken fancifully that this music of the invisible Ariel is just that adolescent intoxication which makes a favorable condition for falling in love; at any rate he is already in the presence of Miranda. The young girl has never seen a youth before. The situation is of the utmost speculative interest.

Prospero. "The fringed curtain of thine eye advance,
And say what thou seest yond."

Miranda. "What is 't? a spirit?
Lord, how it looks about! Believe me, sir,
It carries a brave form;—but 't is a spirit."

And later

> "I might call him a thing divine; for
> Nothing natural I ever saw so noble."

Prospero is delighted when they fall in love, and promises the spirit freedom for his reward. But presently he says to himself

> " They are both in other's powers ; but this swift business
> I must uneasy make, lest too light winning
> Make the prize light."

We have now seen the first two steps in the pedagogy of Prospero. He has educated Miranda himself, apart from the world, in a remote nook of nature where she has learned to know the sea, the island, the cave, the beast and the fairy; and now he lets her meet the prince beautiful, with whom she falls in love. The girl's selection is a pure intuition, while that of Ferdinand is based upon some experience.

> " Full many a lady
> I have eyed with best regard, and many a time
> The harmony of their tongues hath into bondage
> Brought my too diligent ear ; for several virtues
> Have I liked several women ; never any
> With so full soul but some defect in her
> Did quarrel with the noblest grace she owed,
> And put it to the foil ; but you, O you !
> So perfect and so peerless, are created
> Of every creature's best."

To which she replies,

> " I do not know
> One of my sex ; no woman's face remember,
> Save from my glass, mine own ; . . . . .
> But by my modesty,—
> The jewel in my dower,—I would not wish
> Any companion in the world but you, . .
> But I prattle
> Something too wildly, and my father's precepts
> I therein do forget."

Ferdinand is condemned to bear logs, which he does very much against his will ; and here comes in the core and essence of Prospero's whole plan. He keeps Miranda apart, but not so strictly that the girl does not manage to escape and console her lover with sympathy. This scene, again, is a picture of the world's work and love.

> " There be some sports are painful, and their labor
> Delight in them sets off ; some kinds of baseness
> Are nobly undergone, and most poor matters
> Point to rich ends. This, my mean task
> Would be as heavy to me as odious ; but
> The mistress which I serve quickens what 's dead
> And makes my labors pleasures."

If any one could be so rash as to say that Shakepeare's philosophy is best expressed in any one speech or scene, perhaps this is the one. (Act III, scene 1.) There are many sports which are painful, such as hunting and playing games, but the pleasure found in them makes their labors seem nothing. Now, on the other hand, there are many base and low occupa-

tions which gall the immortal spirit to the center, but if we can once relate them to the notion of love and romance, and see in them the source of sympathy, respect and honor, they are no more than games. All life may be seen from this sporting point of view. It is a game in which every chivalrous spirit will play hard, and "even unto death" for love and honor. This *Weltanschauung* is a true religion, and demands earnestness and heroism; it is a faith which carries men through situations requiring nerve and patience, and it is a worship of the poet's only sacred principle, the principle of love, honor, and chivalry. It is in this spirit that Ferdinand's energies are irradiated into more exalted forms, and it is by this association of Miranda with his trials and exertions that she becomes associated with his very life, and not only a help, but a second self for whom the sacrifice of egoism is not a virtue because of a sympathetic identification. This is the end of this poetic pedagogy. The antinomy of practical ethics which teaches that there is no reason for giving up one's own is solved by the notion of romantic selection, followed by sympathy in experience and in growth. Education may set right the evils of the environment, but natural selection, and for humanity that means romantic selection, is needed to set right the evils of heredity.

We see here how Prospero's pedagogy is the unifying point of the whole play. The sharp contrasts of Gonzalo and Antonio, and of Ariel and Caliban, find a poetic solution in the idea of romantic unity. In the fourth act we read the injunctions to Ferdinand to suppress in himself any desires which might tend to defeat the ideals held before him.

If we take Prospero's pedagogy seriously we may say that no education which does not control selection, irradiation of passion through work and sympathy, and marriage, is likely to cure all the ills that flesh is heir to; or in other words, that the function of education is to control life at its source, and the development of the race through selection. And this is why the true romance always ends with a wedding.

THE ELECTIVE SYSTEM IN AMERICAN EDUCATION.

By Professor D. E. Phillips, University of Denver.

I. Colleges and Universities.

That the elective system presents the most important and far-reaching problem in American education will hardly be questioned. It is of vital concern to college presidents, superintendents, principals, teachers, pupils, parents,—in a word, to all interested in education. It touches alike, private and public institutions, co-educational and non-co-educational; it involves the relation between colleges and secondary schools, between institutions for general culture and those of strictly professional aims; it involves the relation of society and the individual, the question whether one age shall set the standard for another, whether it is the business of education to build on what Nature furnishes or to remedy the defects of Nature. In short, it involves the very aims and ends of education.

Some fifty years ago Spencer's essay on "What Knowledge is of Most Worth?" appeared in the "Westminster Review." A little later the appearance of his essays in book form lifted the question of electives from the bare practical consideration, as urged before that by Jefferson, into a broader plane of scientific discussion; and, as a result, the last few years have been marked by a rapid and marvellous, if not disastrous, spread of the Elective System both in colleges and secondary schools.

The Educational Council of Colorado selected this as a problem for investigation. It fell to my lot to ascertain as far as possible the extent and success or failure of the system as now practiced, whether it has passed the experimental stage, is a misnomer, etc. After much work and correspondence a body of information that will doubtless have much interest for both the professional and general reader has been collected. To accomplish this result two circulars of inquiry were prepared, one for secondary schools, and one for colleges. More than three hundred were mailed to the heads of secondary schools, and one hundred thirty to college presidents. Some one hundred seventy replies have been received from the former, and ninety-seven from the latter. Everywhere great interest seems to be manifested in this question; and, as a rule, the replies are frank and complete. A large number of personal letters

expressing a desire to know the net results have accompanied the formal replies. Some suggestions have led to further correspondence; and I now take the opportunity of expressing my obligation to all who have assisted in making this investigation possible and the results valuable. It is upon this material, and the examination of more than one hundred catalogues and almost as many courses of study in secondary schools that this article is based.

The questions sent to college presidents are here given in order that the reader may better understand the nature of the investigation.

1. To what extent are electives offered in your college?
2. How long has the system been in use?
3. Was it a sudden change or a gradual growth?
4. Can you give something near the order in which the elective list developed?
5. Do you consider it still in the experimental stage?
6. Is it workable? If not, what are the chief difficulties?
7. From the standpoint of your experience, and that of others, is the system entitled to general recognition in the educational world?
8. In your judgment, what is the chief factor that leads to the election of studies: natural adaptability on the part of the pupil, preference for particular teachers, or the effort to secure easy work?
9. What influence has previous acquaintance with the subject in keeping up election in that line?
10. How much may students shorten the course in the professional schools by first taking the Liberal Arts course?
11. How much may students shorten Liberal Arts course by first taking the professional?
12. In your entrance requirements, do you allow any substitution for the ancient languages?
13. Would you extend the Elective System to the preparatory and high school?

In no other country is the Elective idea carried to such an extent as in America. In Germany a choice is offered between different kinds of schools. Within each *Gymnasium*, *Real-Gymnasium*, and *Real-Schule* the courses are rigidly prescribed, but all work in the universities is entirely free. It must, however, be remembered that the place of the German university is paralleled in our educational system only by our graduate departments and one or two strictly graduate institutions. In France, practically the same conditions prevail as in Germany. In England there is more opportunity for choice of studies by individual pupils than in either Germany or France, but probably the Scandinavian countries, especially Sweden, have made the most extensive application of the principle to be found in Europe.

Inasmuch as Harvard has strongly brought the subject to the front, and was one of the earliest to open the way, the origin of our Elective System is usually attributed to this institution. How-

ever, one or two writers refer its origin to the University of Virginia; but, according to the best information I can obtain, it was born about fifty years earlier than the founding of that university, and is the child of Jefferson's fertile and practical brain.

The College of William and Mary was chartered in 1693. Ex-President Tyler was a student here five years, Jefferson two, and Monroe one. Washington, Madison, Jefferson, Tyler, Monroe, and John Marshall, all had official connection with the institution in its earlier days. I now have documents and personal letters containing quotations from the Faculty Books between 1729 and 1784.

At first the college contained three courses and the student passed from one to the other in a fixed order. It was a duplication of the old Oxford curriculum. The schools were: the Grammar School in which were taught Latin and Greek; the School of Philosophy consisting of the School of Mathematics and Natural Philosophy, and the School of Moral Philosophy; and the Divinity Schools of which there were two. In May, 1770, the Board of Visitors passed an order "Letting all such youths whether resident in or out of the college who have acquired a competent knowledge of common or vulgar arithmetic, and whose parents or guardians may desire it, be received into the Mathematical School." Against this the Faculty recorded a vigorous protest. They considered it an attack upon the college system "hitherto approved of in the most famous universities as well as in the statutes of William and Mary College." In 1779 Mr. Jefferson became a member of the Board and carried his innovating spirit into the whole of the curriculum. December 4, 1779, he abolished the Latin and Greek requirements in the Grammar School, substituted chairs of Law, Medicine, Modern Languages, etc., and permitted a student to choose his studies. In 1821, Mr. Jefferson wrote to Francis Eppes that "at William and Mary students are allowed to attend the school of their choice, and those branches of science which will be useful to them in the line of life they propose." The institution has constantly adhered to what it considers the "wise policy" of Jefferson. Practically the only requirement is that a student shall elect at least sixteen hours a week for four years.

Later, it was Jefferson's influence that dominated the organization of the University of Virginia, and in 1825 it opened on the basis of one degree with an "elective system of studies, by which each student was permitted to elect freely the one or more departments in which he would do his work; his free choice made under the advice of those older and wiser, and from an appreciation of his own needs."[1]

[1]The quotations in this connection are from an address delivered at the University of Virginia, 1897, by W. R. Abbot.

At the close of the year 1824, George Ticknor, later Professor of Modern Languages in Harvard College, who had for several years corresponded with Mr. Jefferson on educational subjects and methods, visited him in order to see the new University "fairly opened." "To use his own words, he 'found the system more practical than he had feared;' he found an 'experiment worth trying.'" Upon his return to Cambridge he urged upon the governing body of Harvard "the introduction of sweeping reform." He succeeded in a very limited degree. This was the beginning of the system at Harvard, but it made little advance until 1867. In his report for 1883–84, President Eliot says, "Professor Ticknor who had so effectually promoted the legislation of 1825, was a reformer fifty years in advance of his time."

Some years later Ex-President Quincy, of Harvard, undertook a visit to the University of Virginia, but was stopped by the report of a fever epidemic. Mr. Abbot further points out that in 1850, Dr. Wayland, then President of Brown University, visited the University of Virginia and "explored every nook and cranny of the University," that he later "published a report to the overseers of his University," advocating with "great ability" the system.

In 1830 the University of the City of New York partially recognized the elective system. President Nott, of Union College, was among its earliest champions. The University of Michigan recognized the general principle about 1852 by placing the scientific studies in equal rank with the classical.

The replies to the circular above mentioned represent all parts of the country and practically all the important institutions of higher learning. Before attempting to estimate the extent of the elective system in colleges it is necessary to note the different forms under which it occurs and the various efforts to solve the problem.

When it was found advisable and necessary to teach more than any student could possibly take in four years, the first effort to solve the difficulty generally was to multiply courses, and, in order to maintain the dignity of the original course, to offer degrees intended to bear the stamp of the supposed inferior work. This is characteristic of the smaller and weaker colleges, especially those of the West and South. The new demands have usually been met in these localities by an increase of courses, ranging from two to five. But institutions conferring several degrees are found in all sections, and the system prevails in some very good colleges.

The course system, however, must inevitably disappear in the near future. Signs of its decay are everywhere evident. The fact that nearly all of the better class of institutions, save

those for special scientific work in special schools, such as the Harvard Lawrence Scientific School and Schools of Engineering, are conferring but one degree for all work, makes the idea of cheap degrees, or even of distinction between degrees aiming at general culture, wholly inoperative. Ignoring in five cases the B. S. degree conferred only for such work as above mentioned, we have the following remarkable list of colleges conferring only one degree, namely, A. B.: Cornell, Johns Hopkins, Columbia, Harvard, Princeton, University of Pennsylvania, Leland Stanford, Williams College, University of Virginia, University of Indiana, University of Nebraska, University of Denver, Vassar, Bryn Mawr. These and several other institutions make no distinction as to courses in the College of Liberal Arts. On the whole the tendency of the best colleges is toward reduction, rather than multiplication, of degrees.

An internal evidence of such a downfall is found in the fact that in most cases a certain amount of election within each course, frequent substitution from other courses, and even change of courses, are granted. In all, except a small number of very conservative institutions, at least the junior and senior years are partly elective within these courses.

The Major and Minor System is rapidly being offered as a form of the elective system, although it differs somewhat in its application in different institutions. Under this system a student chooses, generally by the beginning of the junior year, some department or group of studies in which he takes a Major and one in which he takes a Minor. The Major includes at least two years of daily recitation in some one line, but more generally three, while the Minor includes about two-thirds as much work in some different line. A few require only a Major, while two require a Major and two Minors. As a rule the student is free to choose his Major and Minor either from groups of subjects or from any branch in which sufficient instruction is offered, except that in many cases his Minor must receive the approval of the department in which he takes his Major. Smith College, University of Michigan, University of Wisconsin, Indiana University, De Pauw, Johns Hopkins, University of Denver, Cornell, University of Nebraska, University of Colorado, Bryn Mawr, University of California, and thirteen others are operating under this system. There are doubtless other modifications, such as the Harvard and Yale method of encouraging proficiency in some definite line, or that of Washington and Lee, requiring "proficiency" in at least one department. The University of Michigan offers a choice between what is known as the "Credit System" and the "University System." The first demands a certain number of credits, the other depends essentially upon a Major and two Minors.

Closely allied to the Major and Minor System is the requirement of a thesis on some special topic for graduation. Twelve institutions demand of undergraduates a thesis. The most important ones are Columbia, Cornell (thesis now optional), University of Texas, University of West Virginia, Washington and Lee, State University of Washington, University of Wisconsin. Johns Hopkins demands that one or more essays in the candidates own handwriting shall be filed with the registrar not later than the first of May preceding graduation.

Other colleges have adopted the *group system*, such as is in use at Johns Hopkins, University of Pennsylvania, and Bryn Mawr. Students are required to take a certain amount within some one or more groups, or to select some group as their leading line. Although the groups frequently contain only a few subjects, this is a certain form of election, and usually as free as it could be in small institutions if all were elective. In twenty institutions the group system is a definite feature, and in many others it appears in the form of option between two or more subjects. In De Pauw, a student must take one of five languages. The general tendency is to state requirements in terms of "science," "language," etc., instead of designating branches. This is election within limits.

The most complete form of the Group System is found in the University of Pennsylvania. In the first two years there are four groups, which are divided into fifteen in the junior and senior years. New York University offers nine groups after the freshman year. Bryn Mawr has eight from the beginning, and Johns Hopkins seven. In some cases certain subjects are common to all the groups. But even the chasm between these groups is not in many cases impassible. In Johns Hopkins a student may substitute, with the approval of his advisor, other studies for two, in some cases three, of his chosen group. On entering Chicago, the student is offered five groups of which he must take two. Besides all these forms of election there is what is known as the *free elective list*, which, as we shall see later, varies in extent all the way from a part of the senior year to absolute freedom of all work offered in college.

The variety of forms that the so-called Elective System has assumed and, consequently, that its extent can only approximately be measured, might be demonstrated to a much greater extent. Some institutions whose ultimate results amount to a fairly free elective system almost wholly repudiate it as practiced in Cornell and elsewhere. We should no longer speak of the *Elective System*, but of *Elective Systems*.

In the following estimates all of these forms of electives are considered, with the exception, however, that choice between courses leading to different degrees plays no part. The fre-

quent indefinite reply as to the extent of electives makes any average of general result only approximate. However, an estimate of ninety-seven replies gave an average of about sixty-four per cent. of all work as elective, while a wholly independent examination of eighty-seven catalogues gave an average of about sixty-two per cent. The close agreement of these two results shows that the estimates cannot be far wrong. Whatever inaccuracies may still exist, I hope are not serious enough to do any great injustice to any section or institution.

There are seven colleges in which all work may be said to be elective; namely, Cornell, University of Cincinnati, Leland Stanford, University of Missouri, William and Mary College, University of Virginia, and University of West Virginia. Harvard, Columbia, and the State University of Washington make the whole work practically elective; Johns Hopkins's specific requirements are quite limited; the University of Kansas has for six years been almost on a purely elective system; the University of Indiana requires only one year of English, one of mathematics, one of science, and two of some language.

The University of Cincinnati and the State University of Missouri have just adopted the Elective System in its complete form; the University of West Virginia inaugurated it June, 1899; and this is Cornell's fourth year. Twenty-three have adopted some form of the system within the last five years. Tufts College has lately increased its requirements from 48 to 60 hours. This is the only regressive movement found in colleges.

Thirty-four institutions have 70% or more of their work elective; twelve have at least 50% and less than 70%; fifty-one have less than 50%. Princeton and Brown universities are the most striking examples of the better class that have remained largely conservative, only about 50% of their courses being elective.

Although a proper historic account will place the origin of the system in Virginia, and show that Jefferson and the University of Virginia inspired the early reformers, it is undoubtedly true that the lowest ebb of the elective system is now found in the South, both in colleges and in secondary schools. Excepting the three institutions in which all is elective, one may select at least ten of their average institutions in which not more than an average of twenty-five per cent. is elective. This is usually a part of the junior and senior years. But several of their colleges are lately giving the principle a "trial."

In sixty-seven cases the system now in use has been a gradual growth, and in twenty-eight, a sudden change or inaugurated at the opening of the institution. Thirteen college presidents think it still in the experimental stage, while sixty-nine con-

sider the principle established by its practical workings. In answering the question, "Is it workable?" I understand each to refer to the system in use in his institution. Only five speak disparagingly of their undertaking. The president of an institution that has lately inaugurated the system, in answering the question whether it is entitled to general recognition, says, "No, but it means peace among professors."

As already stated, the question, "Is it still in the experimental stage?" received but thirteen affirmative answers as against sixty-nine negative. Inasmuch as questions 5, 6, 7, and 8, involving personal opinions, have been answered with varying degrees of emphasis and certain limitations, a few quotations will be of value. President Droppers, University of South Dakota, emphatically considers it in the experimental stage. President Kingsbury, University of Utah, where about 80% has been elective for four years, says:

"We are not yet fully convinced that it is the best system." President Wheeler: "There is no disposition toward radical change." President Strong, University of Oregon: "In principle, no; in detail, yes." President Craig, University of Montana: "We will never go back to the old class plan." President Pollock, Mercer University, Ga.: "This is our first experience with the system, our feeling is strong that it will be satisfactory." President Hosmer, Southern University: "This is the first year of electives, but we are pleased, and feel sure that we will continue the system." President Schurman: "Yes, technically, until one class has graduated under it; it is, however, satisfactory." President Taylor, Vassar: "Changes are made from time to time in the direction of greater freedom of election." President Davis, Alfred University: "No, it is a positive improvement." President Faunce: "Yes, we are now devising safeguards; a student cannot graduate without some course in philosophy, so in history, so in science."

Such are the typical replies from college presidents where the system is in use to a fair degree.

The replies to the questions "Is it workable? If not what are its chief difficulties?" and "From the standpoint of your experience and that of others, is the system entitled to general recognition in the educational world?" are closely related, and the most characteristic ones are given:

"For last college years and graduate work no difficulties to be met;" "practically none;" "expense" (mentioned fifteen times); "to provide teachers;" "too much latitude;" "no special ones;" "requires careful watching;" "lack of proper advisory committee without prejudices in favor of particular departments;" "absence of class spirit;" "schedule;" "electives are an absolute necessity;" "principle is correct, detail must be adjusted."

President Andrews writes: "This is our first year of electives. If there are any difficulties it is a tendency to combine easy subjects. I believe the system entitled to trial."

President Stephens: "Care should be taken not to multiply courses

beyond the ability of the teaching force, and not to advance students to courses until thoroughly prepared. This done, the way is clear."

President Droppers: "It is workable, only it is in the transition stage. It is a compromise, and compromises are seldom based upon any principle. I do not favor a complete elective system."

President Wheeler: "It is necessary to guard the student against unequal or narrow department prescriptions. The student's records must be more carefully watched than would be the case in a system of greater freedom of election."

President Fulton, University of Mississippi: "Neither students nor instructors would go back to the former conditions."

Dean Buchanan, Cumberland University: "Junior and senior years are elective. The elective system provides for the graduation of the lazy and those of inferior ability, which is of no advantage to them or the cause of education. The *old-fashioned college course* develops the man as no other can, and until developed he is not competent to elect."

Acting Dean of Barnard College: "The elective system is the outcome of the advancement of science, not simply an educational experiment."

President Schurman: "No difficulties have come up. In an institution where studies go because of fashion it might lead to shirking, but we have no such tendency here."

President Angell: "It is wise to have a committee of the faculty to advise new comers."

President Ayres, University of Cincinnati: "All work is elective. It is thoroughly workable, and the only arrangement that gives as good results for university work."

A suggestion comes from Wellesley College and two or three others that now and then a department is somewhat smaller than was anticipated and there is no real need for all the teaching force. One president writes, "Chief difficulty is expense. Professor of physics just now has one student, salary, $1,800, and does no other teaching." Such quotations might be extended to a much greater length, but these are sufficient to show the general status of opinion, especially outside the pioneer and champion institutions of this educational movement.

That the system is generally endorsed, that it is rapidly being adopted and extended more and more, is overwhelmingly evident. It may be argued that such men are simply prejudiced in favor of their own child. But if men who have been educated under the "old-fashioned college course," who, as presidents, have tried both the old and the new, who see both the theory and the practice, cannot approximate the truth, how can we expect it from the speculative theorizer, equally blinded by his prejudices and wedded to his system?

The main theoretical arguments against electives have centered about the classics and mathematics as the supreme and universal medicine for the "sin sick soul," at least for all souls of a high quality; the second chief point of attack has been the inability of the college student to prescribe for himself, and the low motives likely to prompt his choice. On the first contention I have nothing to say here, but on the last have some

suggestions to offer. The question concerning the chief factor that leads to the selection of studies was answered by eighty-eight and commented upon by many. The question may be raised whether a college president, or any one but the student, can tell whether he chooses according to his "natural adaptability." There can be no doubt that continued observation by teachers and heads of institutions fathoms to a large degree both the natural powers of students and their motives of choice. No experienced teacher can operate long under an elective system without forming rather definite and approximately correct ideas on these points. Again, presidents have ample opportunity to obtain a consensus of opinion from the faculty. Some of my communications definitely refer to such as their source of information. Professor Hanus, of Harvard, is working this particular phase of the subject from the standpoint of the student.

As a rule several factors are mentioned and in the order of their influence, though it is not always clear that the writer intends to place one above another. Quite a number of the communications add two factors not mentioned in the circular—"future need or professional aim" and "special advice." However, taking the factors that influence choice in the order in which they are stated, it is found that those mentioned first are as follows: Natural adaptability, 50 times; future needs, 19; special advice, 9; easy work, 6; preference for particular teacher, 4. The motives mentioned second are: Preference for particular teachers, 36; special advice, 20; natural adaptability, 7; future needs, 5. Fourteen give "easy work" as the third factor; 9, preference for teachers; 8, special advice; and 6, future needs. Thirty-six emphasize the importance of previous acquaintance in keeping up election.

The above results speak for themselves, but a few of the common phrases are here added:

"Students should consult wiser heads, and as a rule are glad to do it." "In general, natural adaptability, but some other elements will enter into the choice." "Preference for certain studies and a conviction of their value for the most part—but other factors influence." "A little of each, but the last (easy work) is not conspicuous. Perhaps the second is more powerful." "Utility in earning money." "All three, but chiefly adaptability." "The last two (preference for teachers and easy work) enter somewhat in the beginning but are soon supplanted by the first." "The last very small. When a course comes to be known and elected as a 'snap' the instructor, spontaneously or otherwise, stiffens it up." "Natural adaptability in almost all cases." "Preference for particular subjects more influential than any of these." "Easy work counteracted by proper advice." "Natural adaptability when not checked by circumstances." "Easy work dominant" (by six). "In our experience adaptability has been the chief factor." "The few students that seek for easy work would do poor work under any system." "Advice should never be lost sight of and should be substituted for force." "Training and environment." "Adaptability fixes the department."

The data from 176 secondary schools largely corroborate the above opinions as to the motive underlying the student's choice. The theory of "snaps" and "easy work" as a dominant motive in the election of studies is no longer tenable if we are in any degree to rely upon the opinion of those best qualified to judge. The fact is there was never anything inherent in elective studies that made them easy. A teacher may make any subject about as difficult as he desires. Cannot the study of Milton's "Paradise Lost" be made as difficult as Cæsar? Only the student and the teacher make a subject "easy" and "elementary." When we realize this we shall cease to crowd all the beginning courses into the secondary schools, and they in turn into the grades. We shall follow the example set by Columbia, of permitting a student to take and count beginning Latin in the college. Not as teachers, but only as specialists, can we justify this crowding of all the supposed elementary work out of college. The teacher of literature complains that there is not time to teach pupils the history they lack; the biologist and psychologist make the same complaint concerning ignorance of physiology; the teacher of modern languages goes on using and demanding fine distinctions in English without deeming it necessary to inquire whether the pupils understand what is talked about. So it goes the whole round. Why should any teacher be as narrow and sharp as a needle? Why should we not, in some degree, supplement each other's work? Why any longer wrap ourselves up in a false dignity, assume that we have the subject, and refuse to dwell elsewhere save in the third heaven of the same?

The teacher's personality and honest advice which pupils generally seek and gladly receive is a powerful element in determining their course. So much is this true that some advocates of the old system have taken courage and affirmed that there is no such a thing as "free election." But they fail to see that by the same process it may be shown that the whole of life is "prescribed."

Since the professional schools and the colleges proper include a number of the same subjects and the number is continually increasing as the courses widen, the elective system naturally involves their consideration. My question concerning their relation did not apply to all the colleges. In 9 cases, however, professional courses cannot be shortened by first taking the Liberal Arts course, while in 43 cases they can be shortened one year, and in a few cases one year or more.

The number taking a professional course and later applying for a college course is not very great, but such is no longer uncommon. We have had two cases during the past year. In such cases is a three or four years professional course in theol-

ogy or medicine worth nothing for a college course? Touching this point, 20 say that the Liberal Arts course cannot be shortened by first taking the professional; 15 say that it may be shortened one year; others reply that they have not had to deal with such conditions. This problem will become more and more serious as knowledge widens and the relation and inter-dependence of the sciences become more and more evident.

Entrance requirements are becoming quite complicated. As the elective list enlarges the entrance requirements become more and more elastic. The tendency seems to be to offer groups and to require a certain number of studies in one or more of these groups, to allow substitution of modern for ancient languages, or to require only one ancient language. Harvard has just inaugurated a complete system of entrance credits that allows full substitution. Twenty-seven colleges allow some substitution for the ancient languages; 15 others allow substitution for Greek.

The attitude of college presidents toward electives in secondary schools is a strange phenomenon. To the question, "Would you extend it to the secondary schools?" 36 answer "no," often repeated and underscored for emphasis; and 43 say "to a limited extent." This is strange in the face of the fact that the colleges have made electives in some form an absolute necessity in the secondary schools; first, by multiplying courses and setting special standards for admission to each; and second, by crowding into secondary schools the so-called elementary part of each department and branch of knowledge. Unless college presidents expect high schools to break all possible connection with colleges, they must consider election between courses a sufficient solution of the problem in secondary schools. But this is simply the most indefensible form of the elective system, especially when forced upon boys and girls of 12 or 14.

Life is full of contradictions, and prejudice is the great mantle of night in which they are lost from view. From the conservative element two exactly opposite arguments against electives are presented. The one most frequently met is the danger of specialization which they see in the elective system. But was there no specialization under the strictly required system which once extended from the bottom of the secondary schools to the last year of college, and is still held to in a weaker form by those who oppose the elective system? If six or seven years in a special language is not specialization, pray, what is it?

The opposite argument appears in some of the papers, and is exprsssed by saying that the elective system is likely to lead to "scattered" and "scrappy" courses. I have no doubt that

the Major and Minor System owes its existence and spread to an effort to meet this charge and possible danger, as well as to an effort to extend electives. In some colleges there is a counter movement setting a limit to the number of hours that may be taken in any one department.

The elective system is a fixture so far as our colleges are concerned. The tendency is more and more toward free election. There is no indication as to whether colleges will ever settle upon a small but central core of subjects for all students. Certainly there must be a "golden mean" somewhere between the prescribed four years of classics and mathematics and four years elective laboratory courses, shop work, dentistry, drawing, music, etc. But perhaps we are unnecessarily alarmed. The theoretical educational world will be saved a great deal of needless waste of energy and false alarm when it realizes that logical extremes and practical life are absolute contradictions.

Spencer's contention that knowledge must be valued according to its relation to the fundamental activities of life receives great reinforcement from the enormous "push" and "rush" for a place in the practical world with which the nation is almost intoxicated. Our type of education is more Roman than Greek. Are the most necessary and fundamental activities of life also the highest? Whether education be prescribed or elective matters but little while low ethical ideas dominate. It is easy to say that "education is preparation for complete living." But what is complete living? All people and every age have asked this question, and still there is no agreement. But never was any nation under such an imperative obligation to answer this question as the American people.

II. In Secondary Schools.

It was not feared until the last few years that Electives in Secondary Schools would be pushed so far as to become a serious and even an alarming problem; but it is safe to say that seldom has any innovation involving such great consequences ever spread more rapidly than the elective system has in the past few years. The fact that there are now in progress some six or seven serious investigations of the problem alone proves that it has become the central theme. The consequences and aspects of electives in secondary schools become so important, as compared with its operation in colleges, as to demand separate consideration. Educational thinkers are fairly settled concerning the latter, but so unsettled concerning the former that it would produce no small amount of confusion to discuss the two as one movement however closely they may be allied in principle.

The student in the secondary school is separated from the college student by four years at the most formative period of his

life as regards his intellectual tastes and calling; he is entering the adolescent period with a multiplicity of varying impulses; he has ambitions to be statesman, poet, scientist, philosopher, musician; he barely settles upon one interest before he is swayed by another; he is ignorant of most branches of knowledge save the rudiments of a few; he is yet largely under the control of parents who think that they know what to make of their child. As Plato says, the young are easily blinded by the false pleasures of ambition, position, flattery of the populace, wealth, power; the higher ideas of duty, true service, and the perfection of life as a real end in itself are so weak in the youth of fourteen that he is most likely to seek immediate and agreeable results. Such are some of the problems to be met by any elective or prescribed system in secondary schools.

Again, what will be the ultimate outcome of this movement? Will the same spirit that has been handed down from the colleges to the secondary schools in turn affect the elementary schools? Will the secondary schools begin to crowd the "elementary" part of their departments into the grades? Indeed, has not the elective system already a hold upon the last two years of the grades? Will the movement end in an unlimited application of the "Doctrine of Interest," so strongly manifested in modern pedagogy? The danger of American education undoubtedly lies in our tendency to swing to enormous extremes, to exalt some one method of instruction, principle, or innovation, as the panacea for all our ills. More than once have we suffered by such foolhardiness. We shall never have a system of education based upon any one principle, doctrine, or method, that may be safely applied without limitation as far as the logical inferences indicate. The ultimate outcome must be a proper limitation and application of different principles and factors.

What attitude do the secondary schools show signs of assuming toward the momentous problems above stated? I sent out the following circular of questions to 320 secondary schools:

1. To what extent are electives offered in your school?
2. How long has the system been in use?
3. Was it a sudden change or a gradual growth?
4. Can you give something near the order in which the elective list developed?
5. Do you consider it still in the experimental stage?
6. Is it workable? If not, what are the chief difficulties?
7. From the standpoint of your experience, and that of others, is the system entitled to general recognition in the educational world?
8. In your judgment, what is the chief factor that leads to the election of studies: natural adaptability on the part of the pupil, preference for particular teachers, or the effort to secure easy work?
9. What influence has previous acquaintance with the subject in keeping up election in that line?

Principals have responded with great freedom and interest.

One hundred seventy-six replies have been tabulated. Some cities having several high schools all under one system made but one report. Besides these formal replies, I have several personal letters and about ninety different courses of study. Every section of the country is fairly well represented, and all the chief cities except New Orleans. The distribution, according to sections, is as follows: South, 24; New England, 28; Middle States, 38; Middle West, including Ohio, Indiana, Illinois, Michigan and Wisconsin, 41; West, 45.

An examination of the material from each section taken as a whole impresses one that each is characterized by tendencies not dominant in others, which in some cases may be definitely, in others only inadequately, expressed. The South is still pervaded by a strong conservative spirit, has few free electives, emphasizes the old standard of mathematics and the classics, and often presents vigorous protests, apparently without deeming argument necessary. The dominant feature in the West is an effort to meet the difficulty by multiplying courses with slight election within courses and some substitution from other courses. Election to meet the demands of some particular college is a prominent feature in this section. In New England the attitude of the universities furnishes one of the perplexing problems, and some protests are offered against their dominance. Especially does it appear that private secondary schools are realizing how completely they are under the control of colleges, and must supply their demand. In New England and the Middle States, one most frequently finds schools having no electives in name, but almost free election on application to the principal. Instead of having no election in name, but liberally granted by permit, in some sections they prefer to solve the problem by exactly the opposite procedure, allowing election in name, but practically determining the pupil's course by *advice*. Papers from the Middle States indicate a wonderful spread of the system in the last three years. Nine out of the thirty-eight schools have recognized electives to some extent within this brief period. The most extensive use of the elective system in secondary schools is found in what is herein designated as the Middle West. In all parts of this section sweeping changes are taking place. They seem about to assert their independence of universities and to displace the *course system* by a small "core" of subjects required of all with everything else elective.

The various systems and modifications in use are manifold, but the most important ones may be summed up under six headings. They are given in the order of their extent as indicated in the replies.

1. The *Course System* is the oldest and most dominant, and

prevails to the greatest extent in the South and West. Eighty-six designate courses as the sum total or principal part of their elective system. But such election of courses before entering school does not belong to the elective system proper. So far as the number of courses can be determined the average in 83 schools is 4.5. Seattle has 5; Kansas City, 4; St. Louis, 9; Milwaukee, 5; Salt Lake, 5; Cleveland, 6; Janesville, Wis., 7.

Strange as it may seem to the educational thinker the most conservative have acquiesced in this unjustifiable form of election. But this only portrays the general condition of life. Customs and institutions are not the products of logic; they simply "grow," and ere we are aware they are wrought into the very fiber of our being. Then all logic, theories of life, morals, religion—everything is made flexible enough to sustain conditions; one inconsistency is only buried beneath another. Defenders of the course system offer animated arguments against any other form of election. But think of a boy or girl of fourteen arriving at one of our preparatory or secondary schools, a stranger to the authorities, perhaps from an uncultured home; the child registers, and is offered four or more courses from which a choice *must* be made. Two or three years later, think of the same child being refused the privilege of taking French instead of German on the ground that "children do not know what is good for them." It may be said that either parents, or friends, or teachers control the original choice of courses; but on what principle are these courses proportioned out, or rather pupils alloted to courses? It is no exaggeration to say that under present conditions chance is usually the determining factor.

2. Finally the *course system* is extended until it breaks down of its own weight. What high school can maintain nine or ten, even five, courses with any marked distinction between them? Again, these courses, like the old original college courses, must in some way or other stamp their graduates with different degrees of proficiency. If all pass into the world as equally educated and cultured, the original idea of courses has, in part at least, failed.

So long as we do not aim to produce specialists, but aim at general culture, courses can be maintained only on the grounds of difference in excellency. To admit, as many now seem obliged to do, that their excellency depends on the individual and not on something inherent in the subjects, gives the whole matter away and admits the fundamental contention of the advocates of the elective system. Under the stress of these and many other difficulties, the course system seems destined to give way to a general *elective system with a "core" of subjects required of all students.*

Bay City and East Saginaw require only English; Erie and Alleghany, three years of English, two of mathematics, and one of history; Hartford, only English and algebra the first year, English and geometry the second; Springfield, Ill., has all elective save English, algebra, geometry, history, and physics; Canton, Ill., requires two years of mathematics, two of science, one and one-half of English, and one of history; Kansas City, Mo., requires four years of English, two and one-half of mathematics, three of science, one of history. In the Indianapolis high schools all foreign languages are elective. Three years of English, one and one-half of algebra, one of geometry, one of history, and one of physics are required. The Chicago high schools during the past year have had an elective system with a required group of two years in English, two of some foreign language, or English continued, one of algebra, one of history, and one of science. The Boston schools have also increased their elective system. Most of the recent changes seem to be in this direction. The principal at Omaha writes: "We are planning a more general election, holding, however, to a list of required subjects as a core."

3. *Election within courses and substitution from other courses.* To this class belong, in some degree at least, forty per cent. of those mentioned in the first division. It also includes a few schools that defer choice of courses until the second or possibly the third year. For example, the Central High School, Springfield, Mass., allows choice of languages in the first year and choice of courses the second year. Some permit pupils to change their course, but require the full completion of the course then chosen. Thus Principal Twitmyer, of Seattle, writes: "When pupils find that they have not elected the most suitable course, they may change to another, but are given time, and are required to complete the whole course."

4. Still another form, by which another course is added to the already large number, has recently developed in several cities. This is designated as the *special elective course.* Toledo, Ithaca, Fresno, Seattle, South Division High School, Milwaukee, have such courses. Just the composition of this course is not in every case specified, although anything except free election from all the courses would be a contradiction. Again, if this be true, nothing, save a real or artificial depreciation of the diplomas, can save such schools from becoming purely elective.

5. No election in name, but *rather free election on application* is more common than supposed. Any one who has ever worked under a prescribed course in a high school or college knows that hundreds of reasonable requests to substitute come up, and that after much discussion about precedent and frequent unfair discrimination as to subjects, the majority are granted. Some

institutions compel the individual to pay a big price for his liberty. Of course no one would advocate that manual training should be substituted hour for hour for mathematics. But to discount Greek credits when offered as a substitute for German is the acme of inconsistency when participated in by those who have upheld the classics.

The permits definitely referred to here are not granted by a contentious faculty, but by power known to be invested in the principal. The Principal of South Division High School of Milwaukee writes: "We have no elective list. A student is required to choose one of five courses. Students may take a special course; for example, elect anything by obtaining a permit from the superintendent of schools. We are inclined to disapprove of the plan of allowing children to choose before they are wise enough to choose." In the Central High School, St. Paul, substitution can be authorized only by the principal, in writing, on the written request of parents. "Special written permission from the principal is requisite to take any study outside the pupil's grade or course, to change from one course to another." Some few state that they have very limited election in form, but probably nothing would be absolutely required regardless of any and all circumstances. The Cambridge English High School has four courses, each with a number of choices. Moreover the head master has complete power to permit changes. This, he says, makes the plan as flexible as can be desired. The principal at Beatrice, Neb., says: "Students made requests for changes ninety-nine per cent. of which were reasonable and had to be granted. We have three courses which on the surface appear to be ironclad, but in reality there are only a few constants and possibly nothing that would be absolutely required." This form of election is undoubtedly more extensive than the returns indicate.

6. The last form that it seems advisable to designate is the *group system*. The most marked example of this is found in the Lyons Township High School. The work is divided into ten groups, the majority of which require certain other courses as a prerequisite. It is only a modification of the group system as formerly noted in colleges. Its merits cannot greatly exceed the old course system.

It is very difficult to determine with any mathematical accuracy the extent of electives in secondary schools. Some give definite per cents for each year. The greater number simply specify subjects; others express it by "very little," "quite extensively," "freely." But, casting out those from which no fair approximation can be made, and combining the results of the remainder with the examination of a large number of courses of study, we arrive at some results which, it is hoped,

do no violence to the truth. All the different forms of electives except the election of courses before really entering school, are taken into account.

The New York Harlem Evening High School and the Galesburg High School are the only ones with absolute free election. The Galesburg system has been in operation since 1895 and is pronounced a success. As already noted, East Saginaw and Bay City require only English. Of the 110 included in these estimates the average amount of free election will probably exceed one year. Forty-five have 40% or more elective; 24 have 50% or more; 17 have 70% or more; the remainder have less than 40%.

Forty-eight have adopted some form of the system within the past three years. In fifty-eight cases it has been a gradual growth, in forty-two a sudden change. Fifty-two consider it still in the experimental stage, while seventy-six think the principle established so long as a certain "core" is required; but, as we shall see later, there is no definite indication as to what that "core" should be. Those using it most extensively are most emphatic in declaring it workable. One hundred four believe some form of the elective system entitled to general recognition in the educational world; twenty-four do not. Thirty-five schools have no election except between courses. Memphis forbids it; in the Pomfret School, Conn., "the school curriculum is absolute." The principal of Wilmington High School says: "There is none granted. Our school would be stronger if we had electives." The Atlanta Girls' High School had electives some seven or eight years ago, but has abolished them. This is the only regressive movement yet found in secondary schools.

That the personal equation unconsciously, if not consciously, enters into such judgments no careful student of human nature will deny. But to wholly ignore these opinions as worthless on such grounds is to reduce ourselves either to egotists or agnostics. What becomes of our own personal equation? Have we greater reason to expect truth from the "chronic" objector to all innovations, who, wrapped in theories and prejudices of the past, speaks from his throne of seclusion?

The vital question of the elective system is, without doubt, in regard to the motives and influences determining the election of this or that study and whether such motives result in the wisest choice for the pupil as an individual. The views as expressed in these brief replies must be regarded as only approximating the truth. Twelve do not answer this question; nine say all of them without specifying their relative importance. The remaining one hundred fifty-five specify one or more motives as dominant, and usually their relative import-

ance. The motives of "immediate future needs," "college entrance requirements," and "special advice" have been added to the three mentioned in the circular. The following is a summarized statement of these motives in the order of their influence:

First: natural adaptability, 73; special advice, 24; easy work, 21; college requirements, 15; immediate future needs, 11; preference for teacher, 9.

Second: preference for teacher, 26; easy work, 20; special advice, 17; college requirements, 12; natural adaptability, 12.

Third: easy work, 16; personality of teacher, 14; college requirements, 8.

Taking the total number of times any factor is at all designated, we have the following:

Natural adaptability, 89; easy work, 57; personality of teacher, 52; special advice, 47; college requirements, 35; immediate future needs, 17.

Fifty regard previous acquaintance with a subject as a powerful stimulus in keeping up election; twenty-two think its influence very limited.

Whatever we may wish to urge against electives in secondary schools these facts alone should forever eradicate the impression that it means chaos, haphazard chance, seeking lines of least resistance, a *laissez faire* policy on the part of those in authority. It does not leave out the aid and counsel of wiser heads whom the young are always eager to consult. On the contrary, it brings together parents, pupils, teachers, and principals in such a manner as to have a beneficial reaction upon all. The strongest papers in favor of electives are simply saturated with the idea of constant advice, consultation, and supervision. These are not the only misconceptions concerning the elective system. It is apparently taken for granted by the opposition that a student is to feel at perfect liberty to enter any class regardless of his qualifications or previous preparation; that order, sequence, and continuity are ignored. Such lawlessness is in nowise advocated, tolerated, or even expected on the part of students. Principal Bancroft expresses the average opinion when he says that students seek advice as to prerequisites and prefer continuous work instead of scattered. It must not be forgotten that there are certain natural as well as contemplated limitations to any elective system.

The influence attributed to the personality of the teacher, though great, is not shown in its real strength. Under the influence of an inspiring teacher students become absorbed in a study, and are largely unable to distinguish as to the source of their inspiration. Several communications both from colleges and high schools mention the fact that under the elective sys-

tem some departments lack pupils. Perhaps a proper investigation would reveal the fact that the trouble lies not in the subjects but in the teachers.

Among the clear discussions found in these papers and the several articles published on the subject, one is somewhat disappointed to find only hints as to how far electives are controlled by higher intellectual ideals, and how far by outside social conditions. Of course all motives are subjective, but some spring from the inner nature, others are thrust upon us by environment. In what proportion do these two forces operate? What is the proper balance? Does the stress of our business world exercise an undue pressure? Under this system will the ideals that govern the student's election tend more and more to be taken from the common populace? Is it the function of education to *form* or *conform to* ideals?

Some of the most characteristic quotations both for and against the system, as seen by principals, may be of interest.

Lewiston, Me.: "My experience in other places with the elective system is not altogether favorable. To me it has seemed that an effort to secure a study reported to be easy is the chief factor in determining the choice of most students."

Belmont, Cal.: "Choice of subject is likely to be made with reference to the easiest course. The other grounds of choice are almost certain to be what are called practical lines—a most irritating term. At secondary school age boys are not, I think, mature enough to choose wisely, and besides I am quite of the opinion that our secondary schools serve to discover a boy to himself."

Kansas City, Kan.: "Easy work and 'easy' teachers attract the 'easy' student, hence we have starred part of our programme."

Hughes High School, Cincinnati, O.: "If an elective system means anything, it means that boys and girls of fourteen or less are to choose what they will or will not study. The very statement of this proposition renders argument upon the subject unnecessary. I hope the teachers of the country have too much sense to be carried off their feet by any such absurdity."

Girls' High School, Louisville, Ky.: "I think this (easy work) is usually the reason. If the choice were lodged in the teacher or parent according to natural adaptability of student it might work advantageously."

Phillips Academy, Andover: "A student generally does not know his natural aptitude. He frequently finds that what he supposed to be such, is not aptitude at all."

Fort Wayne, Ind.: "Elastic elective system is founded on sand, not on laws of mental activity nor on experience. Mixture of sentiment and moonshine."

The following, as well as a majority of the papers, give an entirely different opinion of the system:

Lafayette, Ind.: "It is quite evident that the desire to secure easy work has its influence, but we try to counteract it by methods of instruction. Our work in history is quite as difficult as that of mathematics, and a pupil soon finds that he must work if he wishes to receive credit."

Lynn, Mass.: "In a recent investigation of this question we find that only about four per cent. have chosen to avoid hard work; mostly from a pronounced preference, or to fit them for something in particular."

South Chicago High School: "At least ninety-five per cent. of our pupils wish to do the best thing."

Galesburg, Ill.: "Natural adaptability and what the pupil wishes to do in life. Other factors have some influence, but I consider them secondary.

The Peter Cooper High School, New York City: "Natural adaptability. In some way or other pupils generally find out what they are capable of doing, and make their election accordingly. Pupils are more apt to select too hard work than too easy work."

Male High School, Louisville: "All factors count in school very much as they do in life. With boys of strong character, as with men of strong character, the easiest path is not chosen. With boys of weak or undeveloped character, the easiest path or irrational preferences influence choice."

The Phillips Exeter Academy, N. H.: "We have no place in school where a boy can find a 'soft' elective."

Brighton High School, Boston: "The third is relatively of slight consequence."

North High School, Columbus: "In the main the choice is the result of pupil's individual preference. Pupil is likely to do best work with congenial surroundings. To my notion it matters little *what* the subject chosen is. Interest in the subject and the character of the work done *are what count.*"

Hartford, Conn.: "I presume that all these influences have some weight, but I am inclined to think that the first mentioned—natural adaptability—has most to do with selection of studies."

West Denver: "The primary factor is the consideration of his own future good. Other, secondary, factors are: taste, preference for particular teachers, and effort to secure easy work. The last of these secondary factors, however, is prominent only with those who will not do much work under any system. The elective system stimulates work under the primary factor stated above."

North Denver: "We require a definite amount of certain subjects for graduation; in most cases the pupil does more in each of these subjects than is required. The prevailing opinion among those who have not tried the system is that pupils choose their courses at random. This is not true. The pupils are very free to consult with the principal and their teachers, and this they do. Instead of there being a tendency to secure easy work, we must make an effort to keep the pupil from doing too much."

None of the difficulties mentioned in connection with its application seems to be of a very serious nature. Twelve designate arrangement of schedule and rooms. Five mention the equivalent of the following quotation: "Difficulties not great, need a faculty of men all in earnest and competent to teach effectively enough to make boys work. Have no 'scrappy' or 'easy' courses." For some reason, which I confess I do not understand, expense is the chief difficulty mentioned. Thirty-two make this a specific objection. They must have in mind that a school that adopts the elective system is under obligation to teach all that is called for. Suppose a high school, already of-

fering three or four courses, should suddenly make everything elective, and simply require each student to elect from all the courses now offered eighteen hours a week for four years. What marked additions would be necessary? It is conceivable that a few classes might become too large, but in the main it would be "give and take." Free election does not mean that classes will be formed in any subject and at any time simply on demand. Many institutions limit the number for which a class will be formed to five, six, or ten.

From the material at hand and the general drift of educational progress and investigations we may conclude that not only has the elective system become a permanent thing in colleges, but that it has entered the secondary schools to stay. It may be modified and limited, but never eradicated. The forces behind it are absolutely irresistible, especially in a democratic country. We may as well no longer discuss whether we shall have electives in secondary schools, but at once busy ourselves in finding a possible and proper limitation somewhere short of the kindergarten.

The present tendency among most of the reformers undoubtedly favors a certain "core" of subjects to be required of all with other subjects elective. The immediate future will witness great changes in this direction. But will this "core" prove only a temporary stopping point? Of what and how many subjects shall it be composed? Already there are strong advocates who do not wish to stop short of absolute free election in secondary schools. "Humanity, individualism," they say, "is to be the paramount issue in education." Such representatives as Superintendent Nightingale declare that they have no objections to some constants "provided there are no hard and fast rules to which there can be no exception."

There will certainly be no disagreement about giving English the first place in this "core" of constants; but there is a difference of opinion as to how much English shall be required. My investigation in nowise sustains the statement made by Principal Harris: "Even the most extreme advocates of the elective system would make English a required subject throughout the four years" (Educational Review, May, 1900). However, the increasing importance laid upon English in almost every section is agreeably surprising. The next subject on which there are indications of general agreement is algebra. Should a third subject be added, history seems most likely to be selected. Probably the next choice would fall between one year of science and one of geometry. It would certainly be a great gain if some general understanding could be reached. But this is doubtful concerning either all the subjects above named or the time they should be pursued. It appears that about

three years of English, one and one-half of algebra, one of history, and one of science or geometry, is approximately the average extent of such constants. It seems certain from present indications that Latin will never belong to this number of required studies, nor any specified foreign language.

Some simplification of the aims of our secondary schools seems absolutely necessary. Notwithstanding the fact that only about ten per cent. of the public high school pupils ever enter college, these schools usually assume preparation for college to be one of their chief functions, and, consequently, they are overburdened by attempting to carry the so-called elementary work of various college departments. From one of the large high schools on the coast comes this statement, "We are owned body and soul by the University of California." A striking incident is found in the Cleveland High School. The student is furnished a printed circular, giving the entrance requirements of eighteen colleges, with the instruction that "pupils should decide by the end of the first year what college they will enter." The principal at Bridgeport, Conn., says, "We may be forced to change by the colleges." Principal Abercrombie, of Worcester Academy, writing Principal Ramsey, of Fall River, says: "Will you allow as a general observation the statement that the curriculum of a high school, whether private or public, which endeavors to meet the standard of Harvard, whether on the classical or scientific side, is overcrowded."

Again, the professional and technical schools have made their influence felt in the high school. But of late nothing has been more powerful than the pressure from the business and social demands of the age. With these and other real or imaginary ends to meet, our high schools have become dominated by various and often conflicting aims. Art, music, manual training, including cooking, sewing, millinery, etc., political and social life, commercialism—all demand recognition from them. As a rule the private schools have not yet been overcome by this tide, and are, therefore, free to supply the demands of the colleges.

In conclusion, I frankly confess that this examination has convinced me that the only remedy for the present chaos is a "core" of constants for all; and, unless dominated by colleges, I believe that such can be approximately determined without great difficulty. In determining these constants it must be remembered that we are in great danger of losing sight of high ideals. The nation needs to be baptized in Greek ethics, to lift aloft some ideal higher than ignorant commercialism. If we have not already fallen a prey to this siren we certainly stand in great danger of being swallowed up. During the past meeting

of the State Teachers' Association, of Colorado, the Council was overwhelmingly impressed by the fact that every educational problem was treated, either directly or indirectly, from the commercial standpoint. That the next programme should be devoted to reviving higher aims of life and of education, was deemed imperative. This spirit is not simply local; it is but the reflex of our national life mirrored in our education. Our ideas as to what constitutes a successful and happy life are wrong. Should we not revive the Greek view that the highest good consists in the perfection of man as a natural being, and hold before our young people active virtue as the supreme test of life and that which alone makes life worth living?

COMPARATIVE OBSERVATIONS ON THE DEVELOPMENT OF MOVEMENTS.

By Mrs. KATHLEEN CARTER MOORE.

The classification of movements adopted for these studies does not make any pretensions to comprehensiveness.

The children, a boy and girl, were vigorous and healthy, and no effort was made in either case to teach the movements, although for purposes of verification they were sometimes provoked.

BOY.[1]

EYE MOVEMENTS.—We did not make any experiments in fixating and following, but on the 2nd day his eyes followed a bright, moving object, and observations made on the 8th day showed that he was able to fixate and to follow.

Turning the head to follow with the eyes was first observed on the 38th day.

HEAD MOVEMENTS.—3rd day. The head was lifted several successive times.

Turning the head from side to side was observed on the 4th day, and had become habitual by the 5th week.

In the beginning of the 6th week he was able to balance his head for a few moments at a time; but head balance was not well established till the 17th week.

SITTING.—14th week. He made active efforts to sit, and often cried if laid down after having been held

GIRL.

EYE MOVEMENTS.—On the 2nd day her eyes once followed the illuminated and slowly moving face of the nurse who leaned over her. She could not, however, be induced to repeat the action.

When four and a half days old repeated experiments with a lighted candle in a dark room established beyond a doubt her ability to fixate and to follow with her eyes. These experiments were successfully repeated on the 6th day, the candle being held some fifteen inches from her.

On the 8th day she followed with eyes and head the flame of a gas jet, above and in front of her and distant some six feet.

HEAD MOVEMENTS.—No corresponding record of early head movement.

Turning the head was observed on the 8th day, and had become habitual by the 6th week.

In the 3rd week she was able to balance her head for a few moments; but head balance was not well established till the 25th week, when she could also in sitting balance her trunk.

SITTING.—12th week. She began to try to hold her body erect when held in a sitting or a reclin-

[1] I do not here repeat in detail many of the observations upon the boy because they are recorded in The Mental Development of a Child.—*K. C. Moore.*

in a sitting position. From this time he made daily efforts to raise himself from a reclining to a sitting position. He could succeed in raising his head and shoulders a little way. At last in the 23rd week he succeeded in rising from a reclining to a sitting position, which he maintained for a few moments.

39th week. He became able to sit alone and unsupported upon a hard, flat surface.

ing position. Unlike her brother she did not make repeated and persistent efforts to raise her body.

17th week. She easily raised herself from a reclining to a sitting position, and maintained herself therein for a few moments.

37th week. She became able to sit alone and unsupported upon a hard, plane surface.

TURNING AND ROLLING.—3rd day. He turned his body half way over. Thereafter at intervals he turned himself from the side to the back, from the face to the back, and from the back to the side.

In the 17th week it became easy and habitual to him to turn over.

29th week. He began to roll over and over when upon the floor, thus getting from one part of the room to another.

TURNING AND ROLLING.—No early observations of turning corresponding to these.

5th week. She made a number of unsuccessful attempts to turn from her side to her back.

She did not easily and habitually turn (when lying) till the 41st week.

This habit she never acquired. She was not, however, placed upon the floor at so early an age, but she did not display the same tendency to roll.

CREEPING. — 28th week. He made his first efforts at creeping. When placed upon the floor he rolled over upon his stomach, raised his body upon his arms, and kicked vigorously. Five days later he succeeded in drawing his legs under his body to raise himself, but they slipped and precipitated him forward. Nothing daunted by the hurt received, he continued his efforts.

In the 32nd week he raised his body upon his arms and tried to push himself forward with his feet.

46th week. Finally, having learned to raise his body upon arms and legs, he succeeded in going forward. Thus he laboriously acquired, one by one, the adjustments necessary to locomotion upon hands and knees.

65th week. He gave up creeping, walking instead.

CREEPING.—32nd week. With no observed tentative efforts, she when sitting upon a bed, got over upon her hands and knees, and strained forward, but did not creep, to reach my extended hands.

37th week. When placed upon the floor she got onto her hands and knees, and took steps with her hands, but not with her legs.

39th week. With comparatively little previous effort she started to creep forward.

STANDING AND WALKING.—16th week. He began to use his feet to push himself upward when

55th week. She gave up creeping.

STANDING AND WALKING. 9th week. She began to push with her feet when held in an upright

raised from the bed upon which he lay.

31st week. When held in an upright position he stood for a minute. He did not stand alone as a preliminary to walking alone, although previous to walking alone he sometimes stood without assistance for a few seconds, if helping hands were taken away.

47th week. Holding to a chair he pulled himself to his feet, and took two steps sidewise.

55th week. Walking forward with assistance in balancing was accomplished.

60th week. He took three steps alone. In the 61st week he was able to walk as far as seven feet.

ARM AND HAND MOVEMENTS.[1] He opened his hands on the 6th day and often afterwards.

5th week. Late on this week he began to grasp and to hold the clothing of a person by whom he was held.

5th week. He grasped a finger placed within his palm, and drew it towards his face.

6th week. He began to remove his hands from beneath the covers.

11th week. The thumb was used in opposition to the other fingers.

12th week. He used the forefinger in grasping (with the thumb).

12th week. He began to reach.[1]

15th week. He did much fingering of objects.

position the feet touching something.

19th week. When held in an upright position she sprang to her feet and stood for a minute. Standing alone developed with walking alone.

42nd week. Holding to a chair which lay on its side, she pulled herself to her feet and walked sidewise along it.

42nd week. She walked forward with assistance in balancing.

53rd week. Having been walking around the chairs, etc., she suddenly one day began to walk alone.

ARM AND HAND MOVEMENTS. On the 3rd day she opened her hands and frequently thereafter held them so.

14th day. She clutched the edge of the bath tub and held it firmly. She clutched her father's coat as he was lifting her, maintaining her hold. By the 6th week she too grasped the clothing of a person by whom she was held; but only when induced thereto by a motion of her own body, such as that of being lifted or carried.

4th week. She grasped a finger placed within her palm and drew it towards her face.

5th week. She began to free her hands from the covers.

9th week. She used her thumb in opposition.

I observed no such use of the forefinger till the 33rd week.

9th week. Incipient reaching was observed, the hands moving towards an object upon which the eyes were fixed.

If clothing which she held was removed from her hand, she was soon found to have resumed her hold.

[1] Fuller observations on Arm and Hand movements are recorded in The Mental Development of a Child.

12th week. She was one day lying on my arm, her right side towards me, when she put out her right hand twenty-eight successive times to touch my shirt waist. The tips of her fingers were drawn across the surface touched. The left hand and arm were quiet and flexed, the fist closed.

13th week. She fingered whatever came within her reach.

17th week. He began to display an interest in his own hands.

15th week. Her own hands were now a source of interest and pleasure to her, and also the mittens in which they were sometimes encased.

18th week. About this time the reaching habit and adjustments were well established.

18th week. The reaching habit and adjustments were well established.

20th week. He felt of objects by drawing across their surface his finger tips and nails.

16th week. She employed a similar method in feeling.

Adjustment.—17th week. She could take a "gum ring" put it to her mouth, and hold it there while she chewed on it. She could grasp a teaspoon by the middle of the handle and successfully get the bowl to her mouth.

25th week. He acquired the habit of giving the hands.

19th week. It became habitual to her to give her hands into those extended to her. When she wore mittens she could not be induced to do this.

26th week. Both hands and feet were used as organs of prehension and active touch.

22nd week. When making extraordinary efforts to reach, her feet moved also.

33rd week. The hands were first used simultaneously to perform different acts.

33rd week. The hands were used simultaneously and separately for the first time.

The forefinger was now much employed, poking into little holes, etc.

In the 44th week he began to use a similar method in getting hold of a small object (a bread crumb for example).

In picking up a small object the forefinger approached and touched it first, the hand then closed over it.

Small things were sometimes held between the thumb and forefinger.

36th week. When lying on her back she sometimes put both hands and feet up to her bottle.

49th week. About this time she began to use the thumb extensively as an organ of touch, and for pointing.

62nd week. She now seemed to use the right hand more than the

Adjustments.—72nd week. About this time a favorite amusement (devised by himself) was the fitting of a cylindrical stick into the bore of a spool.

SUCKING THE THUMB.[1] His thumb was in his mouth on the 1st day.

10th week. After many tentative efforts, he acquired the coördinations, and the habit was established.

He at first sucked either thumb, but in the 18th week when the left was encased in a stall, he sucked neither.

By the 24th week he could suck either thumb when the other wore the stall.

left, but was not, and is not now (at 2½ yrs.) markedly right handed.

Adjustments.—66th week. She succeeded after having tried almost daily for three weeks, in getting the end of a shoe lace through the eye hole of a shoe.

SUCKING THE THUMB. — From the 6th week she displayed a tendency to suck the hands; but only when sleepy. If the hands were covered with a shawl she tried to free them. She was observed to suck the knuckle of the thumb of the right hand, the thumb being enclosed in the fist. If the right hand were covered, the left free, she did not try to suck either knuckle.

9th week. When permitted the uncovered use of her hands, she easily and successfully got her thumb into her mouth, but could not long retain it there. Thus almost without tentative efforts she acquired the coördinations. With her also in the 10th week the habit was well established.

She sometimes sucked her forefinger, and her thumb and forefinger. She sucked only the thumb or forefinger of the left hand, had no difficulty in getting it to her mouth and holding it there, and sucked when hungry or sleepy.

She was observed to raise her covered hand towards her mouth, look at it, lower it, and make at that time no further attempt to suck. This action she repeated three times at intervals, during perhaps half an hour.

She began to hold the left thumb outside the closed fist, the right one inside as before.

11th week. The left hand having been kept covered, she began to suck the forefinger of the right hand.

While she was sucking the thumb of one hand, the other hand maintained the symmetry of movement. It was raised toward the face, and minor flexions and extensions of arm, hand and fingers occurred.

[1] For fuller notes of boy see The Mental Development of a Child, p. 12.

16th week. He dropped the thumb to take the breast.

When prevented from sucking she did not fret for the thumb.

13th week. When placed near the breast, having her thumb in her mouth, she took out her thumb and seized the breast.

Ultimately she lost all tendency to suck her thumb, the habit having been constantly combatted.

IMITATIVE MOVEMENTS.[1]—38th week. In this week I saw for the first time a conclusive proof of the imitation of the action of another person, when he took from my hand two spoons which I had been clapping together and awkwardly reproduced the performance.

IMITATIVE MOVEMENTS.[1]—16th week. The first attempt at imitation was evinced one day when her father was playing with her. Holding her in front of him, he alternately approached and withdrew his face to the side of hers, making for her amusement a snorting noise. We then observed her (after I know not how many performances of his) advance her head towards his uttering a long, deep ă—ă—ă. He repeated his actions and she hers some ten times.

By the 25th week she was able to imitate the very simple actions of another person, such as the knocking of a spoon against a saucer, etc.

ADAPTIVE MOVEMENTS.—Early in the third week he began to show some ability to find the breast again if he had lost his hold upon it while nursing.

ADAPTIVE MOVEMENTS.—By the 4th day she had the ability to find the breast if it had slipped from her mouth, although her eyes were closed she moved her mouth with accuracy back to the place at which it had been.

19th week. He got his dress up over his face, and could not get it down, so he turned his head and thus removed his face from beneath the dress.

16th week. As she was lying on her father's arm her brother went to her and began to kiss her cheek noisily. She tolerated a few kisses, then turned her head to hide it in her father's breast, putting out her hand and uttering a scolding ă. When he withdrew she turned to look at him, but each time she perceived him approaching she hid her face and warded him off. The performance was repeated ten times.

22nd week. When he saw approaching the spoon from which he received his water, he seized it by the handle and drew it towards his mouth.

44th week. When trying to get from a sitting position to his hands

29th week. A bottle of milk was brought to her, she never having seen a nursing bottle. She immediately began to reach eagerly for it. It was handed to her in such a way that she might grasp it where she pleased

[1] From these records I have excluded responsive sounds which occur very early (5th to 8th week).

and knees, in order to reach a chair, he fell and hurt his nose, his hands being too close to his knees to balance. Shortly afterwards he repeated the attempt, first placing the right hand upon the floor, as far away from himself as he could reach, leaning over and recovering his position several times, each time placing the hand a little further away, then turning, he threw his weight upon this hand, holding the other in readiness to place beside it as he turned, and successfully got into the required position.

and used it as she would. She took it in her hands, and at once put the nipple in her mouth, upon which, however, she chewed rather than sucked.

42nd week. As she put all small objects into her mouth we had to watch her and repeatedly take them out. She, therefore, watched us, and slipped them in when we were not looking. Before this she had hastily crept away when she saw some one coming to clean out her mouth. If she perceived that she was observed she sometimes spit out what she had, or lowered the raised hand containing what she was about to put in.

The following are a few of the points brought out by a comparison of the foregoing recorded observations.

The development of muscular control proceeded by the group method; but control over the groups of muscles was not always acquired according to the same plan. For example, the boy could balance his head before he could his trunk, but the girl did not obtain full mastery over the muscles necessary to head balance till she could balance her trunk, which, however, she was able to do successfully somewhat earlier than her brother.

The groups of muscles developed in both cases in an order somewhat as follows:

Eyes and neck (for turning the head), hand and arm (for grasping and reaching), neck and trunk (for balancing the head and sitting), trunk, arm and leg (for creeping), trunk and leg (for walking, rising, stooping, etc.).

All impulses to muscles were first diffuse and tended to be symmetrical; but gradually became restricted to the groups to which they specially pertained. The diffusion of the impulses was particularly noticeable in the case of the boy, who developed a number of distinct movements as side-issues or accessories to the conventional ones. As an illustration of this, witness the history of hand and arm movements.

Impulses to arms were at first distributed symmetrically, to both arms and hands, and to both legs. The children sometimes supplemented arm and hand with leg and foot movements. The boy, however, developed an independent use of the feet as organs of prehension, which the girl never did.

One point of difference between the children is noteworthy. He displayed a greater number and variety of spontaneous movements than she did; and, as the records will show, possessed a greater number of body movements; for example, he

had a method of locomotion which she did not have, the ability to roll at an earlier age, and the aforesaid leg and foot movements.

A movement beginning early was sometimes perfected early, as head balance was by the boy. But the fact that it was begun early was not a certain indication that it would be attained early. Creeping, for example, was begun by the boy in the 28th week and persevered in, at intervals, till the 46th week; but not begun by the girl till the 32nd week, yet attained in the 39th.

The boy seemed to acquire a movement at the cost of a greater number of efforts than the girl did, see for example records of sitting, creeping and thumb-sucking.

Attitudes are some indication of the developing activity. This is especially true of hand attitudes, which change with the development of active touch.

What is commonly known as "feeling the feet," was displayed by the girl seven weeks earlier than by the boy, and she could stand as well in the 19th week as he in the 31st.

Stepping sidewise preceded stepping forward (girl 42nd, boy 47th week). She could walk alone when eight weeks younger than he was when able to walk alone. It is here possible that his direct use of the feet in walking may have been side-tracked by the use of the feet as organs of prehension.

Although I watched carefully for the first act of conscious imitation I observed no conclusive example in the case of the boy before the 38th week, while in the 16th week the girl gave undoubted proof of imitation, and in the 25th week, some thirteen weeks earlier than he, such actions had become habitual to her. Again in adaptive movements she was more precocious and more skillful than he. Both children felt of objects by drawing finger-tips and nails across the surfaces (boy 20th, girl 15th week); with both the forefinger was used extensively as an organ of touch, and the girl later (46th week) used the thumb in place of the forefinger. Each independently developed a method of picking up small things (boy 44th and girl 33rd week) which was later replaced by a more skillful adaptation (taking the thing between thumb and forefinger). They used the hands separately—that is wholly asymmetrically—in the 33rd week. What the girl attained was accomplished with fewer tentative efforts (compare the thumb-sucking and reaching series), and perhaps there is a correlation between this and her fewer spontaneous movements, her less diffuse impulses.

It is noteworthy that both acquired rather early a fine adjustment, and delighted to make it.

SOME RECENT ANTHROPOMETRIC STUDIES.

By Alexander F. Chamberlain.

The following notes and discussions of recent anthropometric literature do not aim at being exhaustive, or all-inclusive, but simply to record and appreciate such studies and investigations as have appealed more or less to the present writer in a brief survey of the field. Each study or investigation *résuméd* contributes something towards confirming or disproving opinions hitherto in vogue, brings to light new facts, or suggests new lines of research. The papers here considered are largely such as have escaped general notice, or have not yet been fully discussed by the students of childhood in its somatic-psychic relations.

Bohemia. Investigations on the line of Dr. Porter's St. Louis studies have been carried out in Prague, Bohemia. In connection with the Ethnographic Exhibition at that city in 1895, anthropometric and other statistics concerning some 7,000 boys in the public schools were obtained, and these have been carefully worked over by H. Matiegka. The children concerned range from 5½ to 14 years of age, representing various classes of the population. The chief object of the investigation was to determine what relations existed between bodily development and intellectual activity in Bohemian children. Among the conclusions arrived at are the following:

1. The relation of advancement in school (from class to class) with physical constitution is seen from the fact that bodily weakness, sickness, etc., keep the child away from school, frequently causing, *e. g.*, the loss of a school-year, while a good physical constitution, on the other hand, permits an earlier beginning of school-life, and continued health allows continued promotion.

2. The arrest due to sickness, etc., influences, apparently, the sum of intellecual work performed rather than the capacity for such work; hence a less intellectual capacity is not necessarily to be argued from bodily weakness of this sort.

3. Although the most capable boys, in the lower classes at least, possess statures above the average, direct evidence of influence upon intellectual capacity of small stature and like physical "defects," is not forthcoming.

4. The differences actually existing in stature between boys

of the same age in the various classes are greater than those theoretically calculated; one boy of 10 years, *e. g.*, had the development of an average boy of 6, while another had that of an average boy of 14 (the maximum and minimum height for the same age varied as much as 45.75 cm.).

5. Nutrition (of the Prague children—Prague is a large city, with extensive poor sections—only 49.8% could be said to be well-nourished, while 7.6% were badly nourished) plays an important *rôle*, but after the eleventh year there is a noticeable increase of well-nourished children. The condition of musculature seems approximately to follow nutrition.

6. The increase in weight does not correspond exactly to height at corresponding ages, considerable variations occurring. From the birth statistics of Bohemian children it appears that during the months in which the greatest number of children are born the greatest average weight of children obtains, and that there is no diminution of vitality on this account.

7. The children of the poorer classes are, on the average, less developed than those of the well-to-do sections of the community. Among the least developed are the children of shoemakers and railroad employees, and among the best developed those of butchers, dealers in smoked meats, etc., who probably have better nourishment from abundance of food.

8. Children of immigrants into the city from the country seem rather better developed than city-born children.

9. Purity of race does not appear to imply any special intellectual advantage, the mixed type (as revealed by color of hair, eyes, etc.), which happens to be the prevailing one in Bohemia, possessing, seemingly, the best physical constitution as well as greater talent and better moral endowment. The extremes of the blonde and the brunette types show a less proportion of mentally-gifted children than the mixed type.

10. The mixed type resists disease the best. The blondes are more liable to the infectious diseases of childhood, but dark-eyed boys seem rather more liable than blue-eyed boys to attacks of measles and variola.

11. City-born children, as compared with those born in the country, are slightly more liable to infectious diseases (except scarlatina).

12. City-born children seem to be more short-sighted (8.2%) than country-born children (7.6%). Myopia is more common among brunettes, defects of hearing among blondes.

13. Of the total number (7,607) of boys examined 5.4% had defects of hearing.

14. The measurements of chest-circumference do not permit of any dogmatic inferences.

15. In children the hair darkens somewhat with age; eye-color is somewhat more stable.

16. The circumference of the head (suggesting a larger brain-volume) was more often and on the average greater in the children who were better endowed mentally and morally.

17. While exceptionally endowed individuals do not conform to the rule, the medium brachycephalic form of skull (corresponding to the national type) seems to predominate in the children who are better endowed intellectually—longer or shorter skulls being found in those less or least endowed mentally.

Russia. The results of the measurements (head and face in relation to stature and age) of 936 boys and 264 girls between the ages of seven and sixteen years, belonging to the district of Szerpuchov, in the Government of Moscow, have been published by Vossiljef. The great majority of these 1,200 school children came from the poorer classes (only 30% of the boys, *e. g.*, gave evidence of good nutrition at all), and those of corresponding age are inferior in stature to gymnasial students in the city of Moscow—the Szerpuchow children are from a country district not at all favored socially. The principal facts brought out in this investigation are:

1. The measurements of the boys are absolutely greater than those of girls of the same age.

2. The growth-relations seem to follow, in general, the same law in both sexes.

3. In both sexes there occurs (especially in the head and its individual parts) during the twelfth year a sort of retardation, and often even cessation of bodily growth. The horizontal circumference of the head, while in boys from the seventh year on increases annually about 0.22 cm., augments in the course of the twelfth year only about 00.1 cm., a very insignificant amount, and in girls a diminution of growth also takes place. Length of head and the transverse diameter of the head exhibit similar phenomena during the twelfth year, likewise also the face.

4. The form of the head does not finally shape itself until after the sixteenth year.

5. The breadth-dimensions of the face seem in general smaller in girls than in boys, and yet the face of the former is more rounded in its contours, since the growth in length of the female face is noticeably inferior to its growth in breadth.

With the measurements of Vossiljef on children may be compared those of Vorobjef on adults (212 individuals from the government of Riazan and 232 workmen from the government of Moscow). The principal conclusions of the latter are:

1. The relations existing, according to Roshdestvensky,

between stature and the vertical height of the head, hold for the whole head (cranium and face) also in relation to stature, *i. e.*, to a high stature corresponds a head proportionately smaller in all its measurements.

2. The absolute dimensions of the head increase much more slowly than the more rapid and augmentating stature, thus accounting for the proportionately smaller head.

3. The individual dimensions of the head do not increase in the same proportion as the stature augments, some increase more, others less.

4. There seems to be no direct dependence of the greater or less degree of increase upon the average size of the dimensions, for while some of the absolutely greatest measurements increase with increasing stature more than the absolutely small measurements, others increase less.

5. The individual measurements of the head apparently increase with the augmentation of stature less than those of the face.

Germany. In a paper read before the Halle meeting of the German Anthropological Society in September, 1900, Dr. Schmid-Monnard, well known through his other anthropometrical studies, discussed "The Value of Bodily Measurements as Indications of Bodily Conditions in Children." Besides a brief general review of the subject the author states (with tables and curves) the results of his own investigations of more than 5,000 children in Halle (boys and girls in about equal numbers). Of the children weighed and measured, some 2,000 were of pre-school age, 500 (aged 6-9 years) pupils from the *Volksschule*, 1,700 (aged 6-14 years) from the *Mittelschule*, and 1,000 *Feriencolonisten*, or "outing" children, aged 8-14 years. These measurements were made with the particular object of determining the normal relation of weight to height during the years of childhood. As a general result, Dr. Schmid-Monnard holds that so far no law of growth-relations applicable to all races and to all classes of the population even in Germany has been discovered, each region of the country and each social class having its own peculiarities of growth. Even the periodicity of growth in height and weight, best known through the investigations of Key, seems to have its marked irregularities. With children whose environment is less favorable than that of others of like age, the period of less increase in weight is temporarily prolonged, and moreover the absolute weight per centimeter of height is less than with the children of the well-to-do (in girls from 7 to 10%, in boys from 7 to 9%). So a certain height and the weight corresponding are reached by the well-to-do perhaps two years before they are by the less advantaged—the Halle children from the *Bür-*

gerschule, for example, reach a weight increase (yearly) of 211 gr. per centimeter in their eleventh year, the children of Saalfeld miners in their twelfth, and the children of poorer parents in the *Volksschule*, of Halle only in their thirteenth year. Again, the period of diminished increase in body-weight begins with children generally in the sixth year when they are about 105 cm. tall, ceasing in the case of the Halle *Bürgerschule* pupils in the ninth year at a height of 124 cm., with the Saalfeld miners' children in the eleventh year at a height of 128 cm., and with the "outing" children of Halle in the twelfth year at a height of 135 cm. Another fact deserving notice is the marked increase in growth of the "outing" boys in their fourteenth year, a feature not occurring in the "outing" girls. The most noteworthy fact of all, perhaps, is that comparison of the measurements of individual children with the general average indicates that "the weight for a certain number of centimeters in height may vary, physiologically from 10 to 20%." The author agrees in part with Percy Boulton who, in 1876, expressed the opinion that when the weight of a child corresponded to the height, small size was in no way pathological, since the relation of weight to stature was not directly connected with age—the former, however, failed to recognize the influence of periodicity of growth. On the relations of other bodily measurements Dr. Schmid-Monnard has also something to say. The relation of circumference of chest to half body-length, is not of itself alone a criterion for all children; it would be of more value, perhaps, with children having the same weight. Again, in the fifteenth year when the chest-circumference is supposed to equal half the height, considerable differences in inspiring capacity are noticeable, some children with the assumed normal relations, having such capacity poor or feeble, while others falling below the assumed normal exceed their fellows in inspiring capacity. It would seem, therefore, that a better test of the healthful condition of the individual is to be found in inspiratory expansion, *i. e.*, the amount of the difference of chest-circumference in rest and during deep inspiration.

The relation of chest-circumference to head-circumference has been used by some authorities (Fröbelius in St. Petersburg, Liharzik in Vienna), but the measurements made by Schmid-Monnard on Frankfurt children are in disagreement with such results. According to the authorities cited the chest, which, at birth, is smaller than the head, equals it in circumference (54 cm.) in the twenty-first month, while in Frankfurt this occurs with girls only in the thirtieth, and not even then with boys. Chest circumference itself has been taken as furnishing a norm. The Frankfurt children (artisans'), sound and healthy normal

representatives of the population), begin with a chest-circumference 2½ cm. below the norm given by Uffelmann (31.6 instead of 34), reach only in the sixteenth month the figure (44) given by him for the sixth month, and in the thirtieth month they are still 7 cm. below the figure (54) for the twenty-first month according to Uffelmann. Evidently further careful studies and investigations are necessary before any dogmatic statement can be made.

The permanance of anthropological (physical) characteristics has been studied by Pfitzner, whose researches dealt with 3,660 bodies (chiefly from Lower Alsace) of all ages of life. The object of the investigation was to discover, if possible, what marks of the kind in question are permanent and fixed in the individual and what others are too variable to serve as fixation-data. Outside of sex and age, the length-width index (cephalic index) of the head seems to be the only absolutely fixed characteristic for the determination and recognition of the individual. Relatively fixed, however, is the color of the iris. Stature, width-height index of the head and face can be used provisorily. The color of the hair is a mark in special cases (*e. g.*, in blonde individuals over 40 years of age the color of the hair is permanent). Dr. Pfitzner protests against the attempt by means of mathematical abstraction to "to distil out" a mean around which to group the actual individual cases, as "lamentable examples of less or greater mistakes, excusable or inexcusable imperfections of execution, easy or difficult descents from the reign of eternal laws of nature," holding that "nature knows no fall and no original sin." Individual variations are the expression of a fundamental general phenomenon of life, and we must not see in them a deviation from the lawful type, something illegitimate, something unsymmetrical, but rather a lawful exercise by the individual of his just liberty to make use of the range of variation within fixed limits. Variation must not be looked upon always as a mere matter of progression and regression. There is a great difference also between continual oscillations within two actual extremes and the formation of varieties.

Bulgaria. In 1896, a committee under the patronage of Prince Ferdinand, was formed to undertake a complete study of the country and its inhabitants. Upon other things determined upon was the preparation of a monograph on the anthropology of Bulgaria. An account of the progress made thus far is given by Dr. S. Wateff of Sofia. More than 50 skulls have been gathered in the National Museum at Sofia, and there are many others in monasteries, while exhuming is going on at various places all over the country. Exact anthropological observations and measurements have been made of 5,000 sol-

diers, and the color of eyes, hair and skin observed in all the soldiers of the Principality. With the co-operation of the Minister of Public Instruction, the pupils of all the public schools have had the color of their eyes, hair and skin examined, and the results statistically treated after the model of the Virchow investigation in Germany. The population of Bulgaria is 2,500,000; the total number of school children is 258,368, while the soldiery number some 35,000. Besides the 5,000 soldiers of whom exact anthropological measurements have been taken under the direction of the army physicians, the color of eyes, hair and skin of 31,419 soldiers between the ages of 20 and 25 years, 6,145 children between 15 and 20 years, 20,810 children between 10 and 15 years, and 209,029 children between 6 and 10 years, has been recorded by the aid of their teachers. From these statistics it appears that Bulgarian children grow darker with age in so far as eyes and hair are concerned, for while of the children aged 6–10 years 9.94% are blondes, 45.98% brunettes, and 44.08% of the mixed type, the percentages for the soldiers (20–25 years of age, are 6.13, 48.40 and 45.47, respectively). Arranged in groups of 6–15 years and 15–25 years, the proportions are: for 6-15 years, blondes, 9.65%, brunettes, 46.86%, mixed type 43.49%; for 15–25 years, blondes 5.89%, brunettes 50.43%, mixed type 43.68%. For girls 6–10 years of age the proportion is blondes 10.46%, brunettes 47.15%, mixed type 42.39%; for boys, blondes 9.76%, brunettes 45.67%, mixed type 44.57%, the girl showing a little more of the blonde, more of the brunette, and less of the mixed type. The urban pupils between six and ten years of age showed the following percentages, blondes 8.75, brunettes 52.05, mixed type 39.20, the corresponding percentages for the village (country) schools being 10.23, 44.43, and 45.34, respectively; the pupils from the country being more of the blonde, considerably less of the brunette, and more of the mixed type.

Italy. One of the most interesting of recent investigations is Rossi's study of somatic anomalies in relation to social condition and degeneration. Dr. Rossi examined 100 children and 100 adults each from the working classes, the peasantry, and the well-to-do (students and professional men) of the city and district of Siena, Italy—600 individuals in all. Among the principal facts brought out are the following:

1. With adults, and especially children, of the working classes, as compared with peasants and the well-to-do, a high percentage of multiple anomalies is found, the last two classes being also noteworthy for higher percentages of adults without anomalies, while the children of the well-to-do seem particularly favored in this respect.

2. Children seem more subject to multiple anomalies of the

larger groups than adults. The proportions of children having three or more anomalies are, among the working classes 79%, peasants 81%, well-to-do 44%; the corresponding figures for adults being 40%, 26% and 18% respectively.

3. Prominent cheek-bones appear to be the only anomaly showing a distinctly greater prevalence in adult age among all classes, the other anomalies decreasing, or remaining practically stationary.

4. The falling off in the percentage of anomalies of the skull in adult age among the working classes and peasants is very noticeable, but facial asymmetries seem to exhibit no such tendency to decrease.

Rossi also examined 75 persons arrested for begging, and here the effects of poverty and low social condition are more manifest, but not so much as in the case of children from the Orphan Asylum. The proportions of beggars having cranial anomalies, voluminous lower jaw, "handle" ear, prominent cheek-bones, facial asymmetry, are 21.2%, 30%, 34.3%, 34.3%, and 18% respectively. For children of the Orphan Asylum the corresponding figures are 84%, 25%, 0%, 41.6% and 33.4%. Noticeable here also is the great prevalence of cranial asymmetries in childhood (the growing period); likewise the larger proportion of facial asymmetries as compared with adult age.

Dr. Giuseppe Bellei, of the Municipal Hygienic Department of Bologna, has examined carefully by the dictation-method 460 pupils (average age 11 years and 6 months) belonging to the fifth elementary class in the public schools of that city. There were 6 dictations for each child, given at the various hours of the school-day), taking from 20–25 minutes. The chief conclusions arrived at are as follows:

1. No evidence as to the diverse fatigue-influence of the various subjects of instruction is forthcoming.

2. The first lesson-hour is a useful mental exercise if the pupils during that time succeed in arousing themselves from the disattention under the influence of which they are when they enter school.

3. The morning school does not produce notable mental fatigue.

4. The noon rest is very useful to the pupil since it does not destroy the good effects produced by the mental exercise of the morning, and renders him capable of better work than he is able to give after a prolonged rest, as observed when entering school.

5. In spite of the fact that immediately after the noon rest the pupils are in the best conditions of mind, an hour, or a little more, of school in the afternoon is sufficient to induce so much

mental fatigue, as to cause at the end of the afternoon's lessons, the worst work of the whole day.

The general statement seems justifiable, therefore, that, if the morning school does not fatigue, it exhausts the mental resistance of which the pupil is capable to such an extent that he is unable to undergo even brief mental labor during the afternoon without exhibiting the most evident signs of notable fatigue.

France. At the Vaucluse Hospital for feeble-minded children, imbeciles and idiots belonging to the Department of the Seine, Th. Simon has carried on anthropometric investigations (height, finger-reach, circumference of chest, width of shoulders, maximum circumference of head, weight) on 223 boys from eight to twenty-two years of age—seventy-three being between eight and fourteen. The author publishes his data in great detail, and comes to the general conclusion that a correlation between physical and intellectual development does exist, such parallelism being only "the expression of the fact that the physical constitution and the mentality of an individual are only two aspects of physiological activity, representing two equivalent forms of the same individuality." The departure from normal children of like age is most marked in the idiots and imbeciles (a very large proportion of these falling below the normal average with respect to the measurements in question), while the constitution of the feeble-minded is, physically, in the case of the majority, nearer that of normal children. Here, as elsewhere, however, the usual exceptions occur, for some idiots exhibit a development quite equal or even superior to that of the feeble-minded, and, on the other hand, some feeble-minded children lag behind the idiots. Says the author: "It is less an alteration of the proportions of the diverse parts of the body that distinguishes the idiot and the imbecile from the feeble-minded child than the absence of development considered in its ensemble." There seem to exist in both classes of defectives two types, one of which is characterized by the fact that the power of growth has alone remained intact, the other by the fact that it alone has been effected.

In order to study still further the questions involved, Dr. Simon measured, a year later, 176 of these same boys, the results of the comparative investigation being detailed in his thesis on "The Correlation of Physical and Mental Development," where his former conclusions are all confirmed.

At the National Trade School at Vierzon (Department of Cher, central France) trimestrial anthropometric measurements (weight, height, chest-circumference) were carried upon between April, 1889, and July, 1891, with a view to ascertain whether the manual labor imposed upon the pupils had any

disturbing effect upon their physical development. In all, 269 pupils (aged 12–15 years) were measured (the numbers for chest-girth being considerably less, owing to the fact that this measurement was not taken until April, 1890). The results of these measurements carried on by MM. Baudrillard and Douchez of the faculty of the school have only recently been published by the latter. The statistics indicate that growth in weight takes place principally from July to January, with a slowing up from January to April and somewhat of a rise between April and July. The growth in height is more regular, and a period of maximum stature growth seems to be also one of relative repose for weight-increase—the augmentation of stature taking place probably somewhat at the expense of growth in weight, and *vice versa*.

Growth in chest-circumference seems to be least from October to January, increasing from January to April and from July to October. The Vierzon measurements confirm in several respects the results of the investigations of Malling-Hansen, Daffner, etc. The diminution of weight from April to July (noted particularly in 1891), is attributed to the mental work necessitated by the learning examinations, confirming the results of Binet in 1900, at the École Normale d' Instituteurs de la Seine, and in 1898 by Ignatief at the Moscow Institute of Surveying. The fact that the minimum of increase in weight occurs earlier at Vierzon than in Copenhagen may, Dr. Douchez thinks, be due to difference in climate. That the trimestrial differences at Vierzon are less than those noted by Daffner may indicate that "manual labor exercises a regulative *rôle*."

England. The Studies of Miss Alice Lee and Professor Karl Pearson on the "Correlation of the Human Skull," are of very great interest because "the chief characters of the skull are very loosely correlated, and such correlation as they possess varies in a remarkable manner with sex and race." From the statistics of the skull capacity (as estimated from the head of the living) of some 60 men and 30 women, "whose relative intellectual ability can be more or less roughly appreciated," the authors conclude that "it would be impossible to assert any marked degree of correlation between the skull capacities of these individuals, and the current appreciation of their intellectual capacities." In the course of these investigations it turned out that "one of the most distinguished of continental anthropologists had less skull capacity than 50% of the women students of Bedford College, and one of our leading English anatomists than 25% of the same students." Of course probable skull capacity is not brain-weight, but there is enough in these studies "to cause those to pause who associate relative brain-weight either in the individual or the sex with relative

intellectual power." The authors conclude on this point that "the correlation, if it exists, can hardly be large, and the true source of intellectual ability will, we are convinced, have to be sought elsewhere, in the complexity of the convolutions, in the variety and efficiency of the commissures, rather than in mere size or weight." The cephalic index, too, "has very little correlation with capacity at all,"—in a dolichocephalic race a narrower skull may mean larger skull capacity, which in a brachycephalic race is likewise indicated by a rounder skull. Hardly more than this can be said, and the correlation between cephalic index and intellectual capacity in the individual hardly exists.

Scotland. The "Physical Characteristics of Adults and School Children in East Aberdeenshire" have been studied by Gray and Tocher. Altogether there were observed the color of the hair and eyes of 14,561 children (boys 7,717, girls 6,844); the color of hair and eyes and shape of nose of 2,860 adults (males 2,309, females 551); and the same observations, with the addition of measurements of height standing, height sitting, maximum length and breadth of head of 169 adults (agricultural laborers chiefly), 195 adults (rural population) and 38 fishermen. Comparisons of percentages, etc., are made with the Virchow statistics for Germany, with the result that in this part of Scotland "we have a very much greater percentage of the blonde element than has been generally supposed." Other general results are thus indicated: "there are about 15½ per cent. more fair-haired children than fair-haired adults, and 17½ per cent. less brown-haired children than brown-haired adults. This points to the conclusion that 15 to 16 per cent. of the whole population are transferred from the fair to the brown category in passing from childhood to adult age. It is interesting to find that Virchow estimates that the increase of brown among adults in Germany is 15 per cent." It also appears that "between boys and girls the percentage of dark hair is practically equal, and the girls have only 3 per cent. excess of dark eyes; but adult females have 11 per cent. more dark hair than adult males, and 16½ per cent. more dark eyes." This fact indicates that "the darkening of the females is post-natal." These investigations also reveal "great local variations" in pigmentation, showing clearly "how unreliable small samples are when used to determine the mean pigmentation of a district."

Some of the material in this article has been published in greater detail in the "Transactions of the Buchan Field Club," 1895-1900.

Illinois. (Chicago). As a result of the "Child-Study Investigation," carried on in the public schools of the city of Chicago from March, 1899, to June 23, 1899, Dr. W. S. Chris-

topher is of opinion that "it is clear from the foregoing charts and tables, that on the average those pupils who have made great intellectual advancement are on the whole taller, heavier, stronger, possessed of greater endurance and larger breathing capacity than those who have made less advancement" (p. 25). Dr. Christopher also presents the following "conservative conclusions," which he thinks his observations fully justify (p. 45):

1. In general there is a distinct relationship in children between physical condition and intellectual capacity, the latter varying directly as the former.
2. The endurance (ergographic work) of boys is greater than that of girls at all ages, and the difference seems to increase after the age of nine.
3. There are certain anthropometric indications which warrant a careful and thorough investigation into the subject of co-education in the upper grammar grades.
4. Physical condition should be made a factor in the grading of children for school work, and especially at the entrance into the first grade.
5. The great extremes in physical condition of pupils in the upper grammar grades make it desirable to introduce a greater elasticity into the work of these grades.
6. The classes in physical culture should be graded on a physical instead of an intellectual basis.

The children investigated by Dr. Christopher numbered some 1,200, ranging from 4 to 16 years of age, and about evenly distributed between the sexes.

The results of further investigations carried on from July, 1899, to July, 1900, by Mr. F. W. Smedley, director of the Child-study Department, have also been published. Up to the date indicated 6,259 pupils (boys 2,788, girls 3,471) from various grades (kindergarten to high school) have been measured and subjected to experiment. The general condition of these school children is indicated thus (p. 11): "The pupils of these schools are largely of American parentage and are the children of parents in comfortable circumstances, so that they are uniformly well fed and clothed. Therefore, it is believed that they may be taken to represent normal Chicago children, living under good conditions."

Concerning the conclusions arrived at by Dr. Christopher Mr. Smedley remarks (p. 70): "The work this year, so far as it relates to them, confirmed these deductions, except as to the age [Mr. Smedley places it much later] when great differentiation of the sexes in endurance begins." Mr. Smedley's investigations also emphasize the "extensive range of all physical features during the pubescent period." Among other con-

clusions "fairly indicated," according to Mr. Smedley, are the following:

1. Unidexterity is a normal condition, and on the whole, there is a direct relationship between the degree of unidexterity and the intellectual progress of the pupil.

2. Boys of school age at the Bridewell are inferior in all physical measurements to boys in the ordinary schools, and this inferiority seems to increase with age.

3. Defects of sight and hearing are more numerous among the dull and backward pupils.

4. The number of eye and ear defects increases during the first years of school life.

5. The well-known muscular differentiation of the sexes practically begins at thirteen.

6. The development of vital capacity bears a striking resemblance to that of endurance, the curves representing the two being almost identical.

Maryland. In November, 1899, Dr. H. O. Reik, of Johns Hopkins University, took part in the anthropological investigation of the children in "a large school in Maryland." By him the ears of 440 children (boys 215, girls 225),—"a fair average of the children attending Maryland public schools, or, I think I might even say, American public schools,"—were carefully examined. The ages of the children ranged from 3 to 21 years, the great majority (378) being between 7 and 17 years old. The standard description of a normal ear, according to Dr. Reik, is as follows (p. 320):

"It should be about twice as long as broad, and in its attachment to the head should bear an angle of not less than 15 nor more than 30 degrees. It should have a gracefully curved outline, being nowhere pointed or irregular, have a well-defined helix, separated from the anti-helix by a distinct scaphoid fossa extending down nearly to the level of the anti-tragus. The root of the helix, should be lost in the concha before reaching the anti-helix. The anti-helix should not be unduly prominent and should have a well-marked bifurcation at its superior extremity. The lobules should be shapely, not adherent nor too pendulous, and free from grooves extending from the scaphoid fossa."

Among the results of this investigation are the following:

1. The number of abnormalities was much greater among the boys than among the girls. This is especially the case with the varieties of malposition and defects of the helix. The rougher life of the boys, their manner of putting on and taking off their hats and caps, account for some of these abnormalities.

2. The auricle gradually increases both in length and width

with each year of life up to the twentieth, and growth is perhaps not quite complete even then.

3. The most rapid growth is in the earlier years, and the annual increase is slight after the fifteenth year.

4. In 142 of the children, or 32.7%, there were differences, more or less slight, between the right and left ears, the right being the larger in most instances.

5. Some of the same abnormalities present in these normal healthy public school children occur in almost exactly the same proportion as Dr. Hrdlicka found among the white children of the New York Juvenile Asylum, and the author not only endorses but emphasizes Dr. Hrdlicka's statement that "any of the abnormalities met with in this institution can also be met with occasionally in the children of any class or social position."

Dr. Reik also tested the hearing of these school-children (220 between ten and twenty years of age may be said to have undergone the test accurately) with the Galton whistle held 10-12 inches from the ear. The results indicated that "the vast majority of those examined had shown a much higher record than the supposed normal," and the author thinks that if his investigation is in any way correct, "the normal limit for high tones is far above 32,000 v. s. or even 49,000 in young persons, and many of these can hear over 70,000 and some over 100,000 vibrations per second." We have here, Dr. Reik thinks, a case of too low normal standard, rather than of hyperacuity of hearing.

From the hearing tests (whisper, ordinary conversation, watch-tick, acoumeter, forks, whistle) 45 pupils, or 10.02% were recognized as having defective hearing. In 13 of these cases "the defect was due simply to accumulation of cerumen in the external auditory canal and could be easily remedied," while in the remaining 32, "the faulty hearing was the result either of former disease of the ear or of present abnormal conditions of the ear, nose, or throat, which would require the attention of physicians accustomed to deal especially with those organs." In the majority of the 45 cases of faulty hearing "the loss of hearing was only slight and the prospects of partial or complete restoration under proper treatment would be good."

Massachusetts. In his brief paper on "The Relation between Physique and Mental Work," Dr. Beyer presents the results of the examination of 76 boys from the vicinity of Charlestown, Mass., made at the Boston Navy Yard. Height, weight, chest-circumference and general health were considered, and the conclusion arrived at that there exists "a most important and significant relationship between the physique and the mental performances of man." In other words, "all the important

results obtained by Porter, by his researches on 'Precocity and Dulness' are hereby confirmed." Dr. Beyer is also of opinion that "a great significance must be attached to the weight in judging a child's physique and, consequently, also its capacity for mental work."

In his Report as School Superintendent of the town of Andover, Dr. G. E. Johnson discusses "Some Facts of Child Development and their Relation to School Work and School Grading." The measurements of Andover School children, although the number studied is "far too small to afford any scientific value standing alone," nevertheless are of interest since, as Dr. Johnson holds, they confirm the conclusions of Porter, Beyer, etc. While admitting that not all large children are individually brighter than smaller children, and that small children may be as perfectly developed for their type as larger children for theirs, he concludes that "children of less perfectly developed bodies, of whatever type, may with reason be said to be inferior mentally to more perfectly developed children."

Nebraska, (Lincoln and Omaha.) In Nebraska, investigations suggested by the work of Dr. Porter in the St. Louis Schools, have been carried on by Prof. W. W. Hastings. During May, 1898, more than 2,500 children were measured at ten schools in the city of Lincoln, and during May and June, 1899, some 10,000 in the schools of Omaha. In the Lincoln investigations: "the physical basis of mental efficiency was indicated though not as accurately as in the results obtained by Dr. Porter from St. Louis schools, because the number of children near the extremes was not sufficiently large to permit the calculation of an exact mean." By the results obtained in Omaha: "the physical basis of mental efficiency is satisfactorily demonstrated, and the conclusions of Dr. Porter sustained." According to Prof. Hastings, "children of the same age and sex increase in mental efficiency according to the development of their various physical qualities, height, weight, etc," Prof. Hastings claims even more than this, viz., that, "not only is it true that children of better physique are more advanced in school grades, but, as a rule, the percentage of their class standing [*i. e.* for children 8, 9, and 10 years of age] increases with the advance in school grades." But in Omaha, "a distinct variation from the rule" occurs in fact that "girls eleven years of age in the third grade are heavier than those in the fourth grade." That boys of eleven in the sixth grade "are slightly ($\frac{1}{10}$ of a pound) lighter than those in the fifth grade of the same age," Prof. Hastings considers "of no special moment," and thinks that upon certain other exceptions in the first grade boys and girls

"no stress can be laid, since the number in each case is too small to warrant the calculation of an accurate mean."

New York. At the meeting of the Section of Anthropology and Psychology of the New York Academy of Sciences on Feb. 15, 1901 (*Science*, N. S., Vol. XIII, p. 468), Dr. D. R. Major reported the results of physical and mental tests (visual and auditory memory for figures and words, striking out of A's, naming 100 words, copying of figures, weight discrimination, perception of size, sensation-area, eyesight, age, talkativeness) made upon 150 school-children (68 ranking high, 82 low in class) of the city of New York with a view to discover "what relation, if any, exists between class standing and the ability shown in the particular tests used." Tentatively, it may be said that "the class standing bears a close relation to the ability to pronounce words, to carefulness or accuracy in striking out A's, to memory for words, to eyesight, to age (the average age of the good pupils being less than the average age of the class), and to talkativeness (the good pupils being as a rule talkative)." Between ability displayed in the remaining tests and class standing "little, if any relation" appears to be indicated.

Out of the general mass of the preceding data the following items may perhaps be singled out as worthy of special attention and as deserving further investigation.

1. *The arrest due to sickness influences the sum of intellectual work performed rather than the capacity for such work* (Matiegka). In this connection it were well to read Mr. W. W. Johnston's discussion of "The Ill-Health of Charles Darwin—Its Nature and its Relation to his work," in the "American Anthropologist" for January–March, 1901. Here, too, the schools may be wrong in emphasizing the sum of work performed instead of the capacity for work.

2. *Purity of race does not seem to imply any special intellectual advantage.* (Matiegka.) There is a word of wisdom here for certain American political philosophers.

3. *The weight for a certain number of centimeters in height may vary physiologically from 10% to 20%.* (Schmid-Monnard.) Similar physiological limits exist no doubt for other somatic relationships, and not a little of the figuring upon which even "laws" have been "discovered" must go by the board. The recognition of large physiological limits of variation must modify considerably prevalent ideas about growth and physical development.

4. *Individual variations are the expression of a fundamental general phenomenon of life. To vary within certain, by no means small, physiological limits is an individual right, not a defect or a mistake.* (Pfitzner.) This naturally goes with the preceding. The individual is somatically as much an entity *per se* as he is

mentally. Individuality is too sacred to be tied up to an "average."

5. *Children seem more subject to multiple anomalies than are adults.* (Rossi.) This indicates here, as elsewhere, that a considerable proportion of the "anomalies, abnormalities, and defects" of childhood are of a more or less transitory nature, passing away before the attainment of manhood and womanhood without leaving in their train any serious consequences. It also suggests that the importance of some of these "physical defects" has been not a little exaggerated. They may, in fact, some of them do certertainly, act as "safety valves" during the years of growth. And some of the worst of them are hardly more significant in adult age than are extinct volcanoes in sunny France.

6. *Manual labor seems to exert a regulative influence upon the periodicity of growth in stature, etc.* (Douchez.) This interesting fact from the Vierzon school deserves further investigation. If it be true that the periodicity of growth in stature is a natural physiological law, it may be a fit subject for inquiry how far manual training should be allowed to interfere with it. It would be well if investigators would pay more attention to such factors, apparent or real—a thorough-going study of the "normalizing" of periodicity in growth would be a welcome addition to the literature of anthropometry. Manual labor is not the only thing that could act in the manner suggested by M. Douchez.

7. *Unidexterity is a normal condition, and on the whole there is a direct relationship between the degree of unidexterity and the intellectual progress of the pupil. Training in ambidexterity is contrary to a law of child life.* (Smedley.) This statement certainly needs much more evidence to warrant its dogmatism. In connection with Prof. Smedley's results one ought to read Ferrari's suggestive paper on "Ergographic Researches on Women" in the "Rivista Sperimentale di Freniatria" for 1898. Here certain differences between the left hand of man and that of woman, and between the two hands of women are pointed out. Investigations (in so far as such could be made) upon children on the lines of those of Ferrari might result in something of interest, since woman and the child lie so close together in places.

Most of the American studies noted here, those of Matiegka, in Bohemia, of Miss Lee and Prof. Pearson in England, and of Simon in France, have had to do more or less with the question of the relation between physical constitution and intellectual ability,—Beyer, Johnson, Hastings, Christopher, Smedley, and Simon all favor strongly such connection, as does Matiegka in part. In spite of this preponderance of opinion in support of

Porter's views about the physical bases of dullness and precocity, the present writer hazards the opinion that when "all the returns are in" the strength of this argument will largely disappear. School-caused stupidity, which is both artificial and transient, plays its *rôle* here, and the "retardation" of Boas is another factor.

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THE PEDAGOGY OF MYTH IN THE GRADES.

By Ezra Allen.

Mythology has long been a study for college students and mature minds, but its introduction into the kindergarten and grades is comparatively recent, and the pedagogic value of this vast product of the race's imagination has not yet been fully realized. Here is an exhaustless fund of stories that interest the child, and at the same time mould the highest faculties of the soul into rounder, more beautiful and more useful tools. Mary Alling Aber, in her book "An Experiment in Education," evidently misunderstands the possibilities of myth, when she objects to its use on the ground that we ought not to give our youth the worn-out ideas of the past, nor introduce him to religion through pagan forms. With all her successful methods as a teacher, she has failed to see the æsthetic value of these story-roots, and has not understood that the child makes a mythology of his own which does not in any way hinder the later acceptance of current scientific and religious views.

That she is not alone in failing to recognize the value of myth in education is seen when an examination of twenty-five courses of study from eighteen different States reveals that only thirteen out of the twenty-five give myth a place. Its amount varies from a mere mention to a well-planned course. Six more out of the twenty-five use fairy stories. A leading city of Kansas prints a list of two hundred fifteen books suggested for reading, not one of which bears the remotest resemblance to myth. The State reports of Montana and Indiana recommend myth, yet all of the Indiana schools have not yet adopted it. The list of suggested reading from one of these, however, contains Grimm's Fairy Tales and The Heroes of Asgard. On the other hand, the Crawfordsville, Indiana, school has a graded course carefully and admirably planned. In spite of the vast amount of material to select from, and in face of what has been said on myth as useful for the child mind, a large proportion of our schools does practically nothing with it. Not only is the subject neglected, but the methods of using it are not of the best.

I. This article endeavors to answer three questions, which may be briefly stated as "The Why, the How and the What

of Myth in the Grades," perhaps adding nothing new, but striving to epitomize the best thoughts on the subject.

(1.) The love of stories and the faculty of story-telling are two of the soul's ancient inheritances.[1] Primitive races have their professional story-tellers, who come at the invitation of the mothers, gather the children about them and recite the lore of their fathers.

(2.) Civilized children listen to mythic stories with a keen interest. The writer asked children in several schools of different grades in Worcester, Mass., what story they liked best of all that they had ever heard. They wrote replies independently of suggestion from their teachers or others. In the third grades, 82% chose as of prime interest myth and fairy tales; in the fourth, 38%; in the fifth, 42%; in the sixth, 36%; in the seventh, 11%, and in the eighth, 15%. These figures will be further discussed under Part II. The teachers in the kindergartens and first two grades assured me that the favorite stories of their children were likewise mythic in character. The answer to the above question by a third grade boy, who wrote more than was expected, is interesting. (Most of the children confined themselves to naming one.) "Three Little Men in the Wood, The Ugly Duckling, The Golden Bird, Clever Alice, Hop o' My Thumb, Editha's Burglar, Clytie, Daphne, Narcissus, The Water Babies, How Cedric Became a Knight." This boy is the only one who mentioned, in the lists handed in, more than three myths. Clytie, Daphne and Narcissus were mentioned by one other. G. Stanley Hall says, in "How To Teach Reading," p. 30; "Of one hundred twenty-four Boston school boys of thirteen years old, who were asked what books first fascinated them, Robinson Crusoe, Mother Goose, Jack the Giant-Killer, were mentioned in that order of preference by the great majority. . . . Cinderella, Jack and the Bean Stalk, Tom Thumb, Gulliver, Æsop, Red Riding Hood, Arabian Nights . . . came next." In this list, the mythic element predominates. The attitude of the German child toward myth is stated by Lehmann:[2] "The children were always ready to receive the Edda, with its shadowy, yet ever powerfully influencing strength, and never showed a more lively interest than when the old conceptions of the gods were brought before them in connection with Volksmärchen, customs and superstitions."

(3.) We would expect this result from the content of the child's mind at this period, as a few characteristic quotations from a large amount of similar material gathered by G. Stanley Hall will show.

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[1] Clark, W. P.: The Indian Sign Language, p. 109.
[2] Quoted by Zehme in Zeitschrift f. d. d. Unterricht, XI, p. 189.

What children see in clouds: Flocks of lambs grazing; Santa Claus baking round cakes with his furnace all aglow; snow stored up for next winter; parts of night broken up.

Children's sayings about the moon: A boy of five was heard to ask the moon its name; a girl of five would beg the moon to come and play with her; it is personified almost universally; it eats, "When it is thin, it has done wrong, and God withholds food."

Of the sun: Girl of eight, "It is liable to fall and set things afire." "It may singe the tree-tops by dropping too near." Often said to come out of or off from the earth or out of the sea, and goes back to them at night, slipping back across the sky or dodging back underground. Some say it is lit up daily. Often regarded as the father of the stars and husband of the moon.

About the stars: A girl of seven was heard to say: "I can't understand you, poor star." One little boy loved to go to sleep gazing at the Pleiades. One thought the Milky Way a rainbow at night. Two thought it was angels, saints and babies standing close together.

Miscellaneous: Several thought the sky was built by some man, and wondered how he could get up there to put in the stars. The seasons are usually personified. Shadows are believed to be alive; rocks alive, but unable to speak; many think stones grow. Two tested it by keeping some in a box with sand and water for them to eat. Ice is regarded as water going to sleep for the winter, or water tired and wanting a rest. Snow-flakes are said to be feathers, sweepings and dust of heaven. Wind is often talked to. One said, "Bring back that hat and let me alone." "I thought everything had life" seems to express a common belief with children.

In Chamberlain's book "The Child," he quotes sayings from the Russell and Haskell collection, illustrating the ways children account for many phenomena on the basis of their own experience, or by regarding objects as possessed with faculties similar to their own. Many of these sayings would furnish abundant foundation for *pourquoi* myths. Children's ideas of God show that they regard him as a person; oftentimes they picture him with great vividness, as John Fiske relates in the "Idea of God," p. 116. "At five years, I imagined a narrow office just over the zenith, with a tall, narrow desk running lengthwise, upon which lay several open ledgers bound with coarse leather. There was no roof over this office, and the walls rose scarcely five feet from the floor, so that a person standing at the desk could look out over the whole world. There were two persons at the desk, one of them—a tall, slender man with aquiline features, wearing spectacles, with a pen in his hand

and another behind his ear—was God. The other, whose appearance I do not distinctly recall, was an attendant angel. Both were diligently watching the deeds of men and recording them in the ledgers. To my infant mind, this picture was not grotesque, but infinitely solemn."

George Sand wrote that she cursed the day when doubt first came to her about the existence of Santa Claus. She says, "To take the marvellous out of a child's life is to go against the very laws of his nature." All this leads us to the same conclusion as Taine:[1] "The mental state of little children is, in many respects, that of primitive peoples in the mythological and poetical period." And to that of Compayré:[2] "If we let the child alone, and if education did not come in to put reason into his fancies, we should see him creating a new and complete mythology. . . . There can be no doubt that the child gives full scope to this mythologic tendency, which is one of the primitive instincts of human nature. He invests inanimate objects with life and feeling; he personifies them; he deifies them sometimes, just as he will humanize animals and be a prey to La Fontaine's fictions."

(4.) These studies lend added weight to the results of child study summed up by E. B. Bryan:[3] "This" (Childhood) "is also the time to use Myth and Narrative History. . . . . Myth offers a splendid opportunity for introducing him to many of the forces and passions, hopes and fears, victories and defeats that have made this world what it is. . . . . The child is not interested in the intricately complex principles and processes of modern society, but its interest in the simple and more tangible beginnings is absorbing."

(5.) No better material can be found for cultivating the imagination and "æsthetic judgment."[4] "I have treated the myths of children as a product of the pure imagination, of the impulse to realize in vivid images what lies away from and beyond the world of sense." The imaginary is the only world to the child as it is to primitive people. The scientific world belongs to the adult. With the child there is no distinction between the true and the false, no difference between percept and image. He is an idealist of the purest type. The characters of his stories act upon a real stage, they have distinct and definite forms, though these forms may be far removed from fact. The boy of three or four who tells of having killed a lion has been through the whole adventure mentally. The imagination, however, works by the same laws whether dealing with

[1] Taine: Revue Phil., I, p. 14.
[2] Compayré: Intell. and Moral Development of the Child, p. 251.
[3] *Pedagogical Seminary*, VII, p. 373.
[4] Sully: Studies of Childhood, p. 61

these early crude products or with poetic subtleties. Unless awakened and fed upon assimilable food, this inventive, originating and idealizing faculty will remain either wholly dormant or assume only infantile proportions. It is capable of early activity, and nothing so arouses it and vivifies it as the story. It is needless to state that the story material must be, in large degree, in line with the child's apperception. This requisite is found in myth and fairy tale. With the mythopoeic faculty awakened, natural objects have a new meaning, and the child weaves his own fancies about the clouds, sun, moon, trees, wind, etc. They become objects of thought with which he can dwell, and by which he enlarges his soul.

(6.) Myth is the mother of religion, philosophy, science, nature-study, morals, art, history, geography and poetry. In it we trace the evolution of all these,—it forms part of the soul's evolution. The beginnings of all these can be taught in harmony with the soul-development of the child by myth as by no other form of story. Here are found ideas of dependence upon higher beings; worship; reverence for elders; love for father and mother, for country and cause; love for the beautiful in nature and conduct; an elementary geography; true poetry, both of idea and of form. The bone and sinew of myth is æsthetic.

(7.) Myth also reveals a new meaning for many of our holidays and customs. Christmas is a Christian adoption of the old Teutonic feast celebrating the sun's turning northward. The Christmas tree comes from the ancient belief that certain trees bloom and bear fruit on the holy night. The giving of presents accompanied the same feast. Fastnacht and Easter have customs handed down from these feasts. The Easter egg is probably a relic of an old Aryan creation myth. May-day comes from the old feast solemnizing the incoming summer. Harvest home marks the time when the frost first began to appear in the highland pastures, when the witches were supposed to kill the grass. (Oskar Dähnhardt, Zeitschrift f. d. d. Unterricht, XIII, pp. 1-13.)

(8.) The cosmopolitan character of our people demands a recognition of all these historical racial elements, and the preservation of the best soul characteristics of the Americans. United States history to-day is the result not only of Mayflower ideals, but also of Aryan and Teutonic customs and beliefs, the unseen influences of which are still mighty in social life. The common origin of our heterogeneous population should be taught to the children. It may be too strong a hope, but there is at least a suggestion here that through myth the common brotherhood—the "solidarity of the race"—idea may be early and lastingly planted.

On the above points, see also H. Landmann, "Märchenun-

terricht," in Rein's Encyclopædisches Handbuch der Paedagogik, IV; Ruskin in "Queen of the Air;" for Folk Lore in Education, Chamberlain's article in *Pedagogical Seminary*, Vol. VII, p. 357, appended to which is a valuable bibliography.

II. The present methods of teaching myth are briefly: (1) Basis for early language work, writing the story after having heard it read by the teacher. (2.) Nature myths told for nature study, about the sun, moon, rain, water, origin of animals and flowers, etc. (3.) As reading material. (4.) In geography; [1]Abbie Roe, critic teacher in Michigan State Normal School, says that myth may be useful in elementary geography for ideas of lands far away. Perseus can be used as a geography and nature study lesson. Such questions may be asked as "Where did Medusa live? Where is the region of cold? When is it cold and dark in the north, and why?"

It is not the purpose of this paper to discuss Language-work, in which, probably, the greater part of myth teaching is done, but it is a pity to so mechanize these beautiful stories. The writer heard one pupil in the second grade tell a little story, and he was struck with the stereotyped English the boy used. Apparently the story existed for him in language form almost wholly. If such a result is obtained before the pupils are old enough to write, the educational value *per se* is lost. The question of any gain in real language instruction is doubtful. When the child begins to write, the deadening effect will be increased. An examination of many such reproduced stories shows a remarkably close imitation of the original words. This method does not train the imagination, it kills it.

To obtain the best results, these stories should be read and allowed to feed the growing faculties. A favorite will be called for repeatedly, and the child will recognize and object to changes, showing that the impression is there, although the memory is not strong enough to recall the whole story spontaneously. But stories are not exclusively for memory culture. Therefore, the stories which children like best should be read to them again and again. The tastes of a room-full will differ enough to furnish sufficient variety. The teacher needs to remember that the mind develops in these early days by its own silent growths, and that what the child can *do* is no test of education, though it may be an indication of training. This fact is eminently true of the [2]imaginative faculty.

[3] "In these wonderful years of spiritual exploration and dis-

[1] D'Ooge: Helps to the Study of Classic Mythology, p. 139.
[2] *Ped. Sem.*, VII, p. 369.
[3] H. W. Mabie in "Reading for Children," Child Study Monthly, May, 1897.

covery, the child ought to have access not to cheap stories artificially and mechanically manufactured to keep it out of mischief, but to the records of the childhood of the race; his true companion is this august, but invisible playmate. . . . . The mind finds delight in things which it can only dimly understand." The same writer says in John Foster (Bookman for June, 1901): "The deepest truths often lie sleeping in the heart of the child long before he knows of their presence or understands what they say to him. He has subtle perceptions of the world about him which seem wholly of the senses, but which register the first delicate contacts of his spirit with nature. Nothing seems quite real to him, or at least quite complete, because everything hints at something more magical and more wonderful which is to come. There were days when John haunted the woods and waited breathlessly for something to happen. What he expected he could not have described; he did not know; he only kuew that the air was full of whispers; that all manner of secrets were being exchanged; that there seemed to be a mysterious understanding between the trees, the birds, the winds, the clouds, from which he was excluded; not because there was any desire to shut him out, but because it was impossible for him to understand. John felt himself on the most friendly terms with this magical world, but the thinnest of veils seemed to envelop him and make clear sight impossible." The touch of myth's dainty wand would have drawn back this veil without tearing it, and John might have lived with the "birds, the wind, and the clouds" not excluded. This picture is not overdrawn. Many persons have had similar impressions.

Nature study can very largely be taught by myth and fairy stories up through the third grade and somewhat in the fourth, if not beyond. But in these grades it is fully time to introduce the idea that these stories are different from ordinary stories; that they are what people used to think about nature. In this way attention is directed to the objects and phenomena themselves, and a new interest is obtained at once. The second grade is none too early for such work in respect to the seasons and the heavenly bodies, though explanations of natural phenomena should be entirely separated from myth. The æsthetic side is to be cultivated by myth, that "glory" which Wordsworth mourns having lost in nature is to be emphasized and allowed full swing.

As soon as the child realizes fully that these myths are primitive peoples' ideas, all the pictures and statuary illustrative of them to be obtained should be brought in. This will serve as introduction to the fine arts. Too early a use of these helps in connection with most of the myths will interfere with the

free play of the imagination, and thus with its creative side, but if introduced when the interest in myth as story is beginning to wane, a new and deeper sense of their genuineness will dawn. Such an introduction to art is none too early for the third grade. In connection with the pictures, attention should be called to the cloud forms in nature, and the children asked to tell what they see. If they write, a written story of their imaginings will be good Language-work and not poor myth study, since their language will be spontaneous. The closer the connection between nature in all its forms and the Nature Myth, the better for the child.

In these same grades, myth may be used for teaching history from the sociological side—what men did, what the occupations of the women were, what kind of animals they had, how they travelled (to some extent)—in short, nearly all their customs and their thought life. All of these are of interest to children, and should be supplied as well as war stories. Miss Roe's geography idea can be modified and developed, but the original aim of cultivating the imagination from the æsthetic point of view must be held steadfastly in mind. In telling Nature Myths, the teacher should be sure that the children know the objects referred to. For example, in connection with Clytie a sunflower should be well known, not always the case with city children. These Nature Myths should be used in the season of year to which they apply, or in connection with the object to which they refer. In this connection, May-day and other days full of value poetically, which are now falling into desuetude, might be revived.

Under methods, the "When" of teaching myth may be discussed, although the writer is of the opinion that no fast-drawn lines can be laid down here. The investigations made by me in Worcester, however, show that the curve of interest falls rapidly, beginning with the fourth grade, as indicated below:

Gr.	No. Preferring Fairy-tales and Myths.	Total No.	Per Cent.
III.	60	73	82%
IV.	26	68	38%
V.	33	77	42%
VI.	14	38	36%
VII.	3	27	11%
VIII.	5	32	15%

Various conditions and variations prevent drawing too positive conclusions from this table. In one school, the percentage of Grade IV (not counting Old Testament stories as mythic) is 33%, and in another 50%. In one school, the percentage

of Grade V, is 68%, and in another 16%. But with all the conditions carefully considered, the fact remains that children are especially interested in fairy tales, fables and myths as far as through Grade III. In the Worcester schools, myth is used much less after the fourth grade. In the eighth grade, our returns show that the interest changes to stories of adventure, for boys, and to novels of the "Little Women" sort, for girls. "Black Beauty" and "Beautiful Joe," which savor of the fairy tale, are attractive all through the grades. Lyon, the editor of "*Zeitschrift für den deutschen Unterricht*," says that the God-teaching of our forefathers is a mighty object of German instruction, which is best left to the conclusion of the course, as well as the little spirits which continue to live daily in the sagas and customs of our people, the myxies and elfs, the kobolds and mighty men, the gnomes, the mountain, wood, air and water spirits.

III. [1]In the choice of myths, ethical considerations must often govern; while with the order of use, psychological considerations must have precedence.

(a) Choice: Two points of view are valuable:

(1) As worthless, those that contain no moral lesson, or which run counter to our moral ideas.

(2) As useful, only those which present, according to the childish standpoint, pure, ideal, æsthetic relations of the will.

(b) Order: Ziller says: "The Märchen must stand in such dependence, that the sequence of their synthetic, spiritual elements corresponds with the natural development of the child's circle of thought." This classification would put the long sagas, such as the Niebelungen Lied, in the upper grades.

Myths of all lands should be carefully selected from. The exclusive days of the classic myths ought to be past. China, Japan, the South Sea Islands, the American Indians, as well as the Teutons and Germans, should all be made to pay tribute. There are numerous beautiful Star and other Nature Myths in North American Indian Folk Lore, not too difficult for the child, which have not yet been put into children's books. Old Testament stories have been passed by too long. The stories of Jacob, Abraham, Joseph and other heroes are full of mythic elements that make for pure culture material. One boy of six turned away from the story of Jesus in the Temple, and said he would rather hear about the golden calf. In one school in Worcester, where these stories had been used, twenty-three out of forty-one fourth grade pupils gave *Moses* or *Joseph* as the story they liked best. If these were counted as myths, in the

[1] Landmann in Rein's Enc. Handb. Article on "Märchenunterricht."

table given above, one fourth grade school would have a percentage of 100% as favoring mythic material above all other.

The question naturally arises, What shall we do with the fairy tales? The fairy tale is a designed fancy, a degenerate form of the myth. The myth, in its root, represents the gropings of the primitive mind after truth. But the child does not make this distinction, and both are alike to him. Yet, so far as culture effect is concerned, the myth is better, because it deals with larger, yet common themes, and has in it the racial struggle, which finds a reverberation in the child mind not at all understood, yet capable of being used and built up into sound fabric. [1] "The boys whose sole text-book were the Iliad and Odyssey, and who learned, therefore, all their history and science in terms of the imagination, became the most original creative and variously gifted men who have yet appeared in history. . . . These stories were not manufactured, they grew They are rich in those elements of culture of which the widest and deepest education is made." Not that these fairy tales should be totally banished. They should have a small place compared with myth, however, because they do not feed the mind on great things. The number of myths, indeed, should not be too large. Stress should rather be placed on a few good ones which best illustrate moral qualities and the æsthetic in nature.

The best German reading books devote large space to them. That of Hopf and Paulsiek contains 575 selections out of a total of 1,489, or 584 pages out of 1,273 pages of reading matter. This material is composed of fables, animal tales of the Æsop order, Grimm's Märchen, Sagas, Legends, and the Greek and Roman myths. In addition to this there are 68 pages of poetical *Lyrische Stoffe*, songs about birds, the seasons, plants and animals, in which nature is often personified. There has been a long struggle over the introduction of Teutonic myth into the schools, but the more liberal party is now winning.

Below are given some gradings of myths, with a few references to reading material.

REIN'S: *Paedagogische Studien.*

First year. *Märchen.*

1. Die Sternthaler.
2. Frau Holle.
3. Strohhalm, Kohle und Bohne.
4. Das Lumpengesindel.
5. Der Tod des Hähnchens.
6. Der Wolf und die sieben Geislein.
7. Der Wolf und der Fuchs.

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[1] H. W. Mabie in "Reading for Children," *supra.*

8. Der Zaunkönig und Bär.
9. Fundevogel.
10. Schneeweischen und Rosenrot.
11. Die Bremer Stadtmusikanten.
12. Der Arme und der Reiche.

"Die Drei Faulen" and "Die Drei Spinnerinnen" are excluded because in them falsehood, lying and deceit are rewarded.

Second year. *Robinson Crusoe.* Every chance for nature study, custom, dress, morals and religion, is fully dwelt upon.

Third year. *Abraham, Isaac, Jacob and Joseph.*

Rein would not introduce Biblical material into the school for the first two years, on the ground that these tales do not correspond with the child's standpoint of the first two years, either in content or in form. The language is also too difficult.

Fourth year. A. *Die Richterzeit. From the captivity to Eli and Samuel, including Ruth.*

B. *Die Königzeit. Saul, David and Solomon.*

Fifth year. *Bible history; the life of Jesus to the death of John the Baptist.*

Sixth year. *Life of Christ concluded.*

Seventh year. *History of the apostles, including Paul.*

Eighth year. *Catechism.*

Songs are also used whose themes have some application to the culture and history material. Twelve are taught the first year, fifteen the secoud,—136 in the eight years.

D'Ooge's Grading of Classic Myths.

GR.	NAME.	NATURE APPLICATION.	MORAL.
I.	Clytie and Apollo.	Sun and Dawn.	Fidelity, Loyalty and Love.
	Echo and Narcissus.	Flowers.	Sin of Neglect.
	Penelope's Web.		Fidelity, Loyalty and Love.
	Æolus and his Children.	The Winds.	
	Hermes's Cattle.	The Clouds.	
	Phaethon.	The Sun.	
	Arachne.	The Spider.	
	Pleiades.	The Stars.	
	Iris.	The Rainbow.	
II.	Ceyx and Halcyone.	Birds.	Fidelity.
	Acis and Galatea.	Water.	
	Ulysses's Dog.		Fidelity.
	Latona and the Rustics.	Frogs.	
	Flocks of Apollo.	Sun and Clouds.	
	Midas.		
	Golden Fleece.	The Sun.	
	Search of Ceres.	The Seasons.	
	Fortune and Death of Orion.	The Stars.	

GR.	NAME.	NATURE APPLICATION.	MORAL.
III.	Marsyas and Apollo.		Presumption.
	Venus and Adonis.	Seasons.	
	Callisto and Arcas.	Stars.	
	Lotus Eaters.	Curiosity and Temptation.	
	Philemon and Baucis.	Trees.	Hospitality.
	Labors and Death of Hercules.	Sun and Dawn.	Bravery, Courage and Strength.
	Orpheus and Eurydice.	Sun and Dawn.	Fidelity, Loyalty and Love.
	Cycnus.	Bird.	
	Flight of Arethusa.	Water.	
IV.	Echo and Narcissus.	Flowers.	Sin of Neglect.
	Jupiter and Io.	Beasts.	
	Adventures of Perseus.		Bravery, Courage and Strength.
	Adventures of Theseus.		Bravery, Courage and Strength.
	Ulysses and Bag of Winds.	Winds.	Disobedience.
	Apollo and Daphne.	Sun and Dawn.	
	Pride and Grief of Niobe.	Seasons.	Pride.
	Arachne.	Spider.	Pride.
	Hyacinthus.	Flowers.	
V.	Theseus and Ariadne.	Sun and Dawn.	Bravery, Courage and Strength.
	Adventures of Ulysses.		Bravery, Courage and Strength.
	Actæon and Diana.	The Deer.	
	Pandora's Box.		Curiosity and Temptation.
	Perseus and Gorgons.	Twilight.	
	The Myrmidons.	Ants.	
	The Heliades.	Trees.	
	Phaethon.	Sun.	
VI.	Hippomenes and Atalanta.	Beasts.	
	Adventures of Æneas.		Parental Love and Piety.
	Rape of Europa.	Sun and Dawn.	
	Perseus and Andromeda.	Sun and Dawn.	Bravery, Strength and Courage.
	Death of Orpheus.		
	Philemon and Baucis.	Trees.	Hospitality.
VII.	Cadmus and the Dragon's Teeth.		Obedience.
	Ganymede.	Eagle.	

GR.	NAME.	NATURE APPLICATION.	MORAL.
	Calydonian Hunt.		Revenge.
	Dædalus.		Wisdom and Skill.
	Aurora and Tithonus.	Sun and Dawn.	
	Cephalus and Procris.	Sun and Dawn.	
	Hero and Leander.		Fidelity, Loyalty and Love.
VIII.	Pentheus and Bacchus.		Impiety.
	The Creation.		
	The Four Ages, and The Flood.		
	Pyramus and Thisbe.	Trees.	
	Bacchus and the Faithless Sailors.		Avarice.
	Cadmus and Harmonia.	Serpents.	
	Admetus and Alcestis.		Fidelity, Loyalty and Love.
	Cupid and Psyche.		Disobedience.

AUTHORS SUGGESTED by D'OOGE ON THE ABOVE CLASSIFICATION.

Baldwin, Old Greek Stories.
Holbrook, Round the Year in Myth and Song.
Pierce, Child Study of the Classics.
Judd, Classic Myths.
Cooke, Nature Myths and Stories.
Kupfer, Stories of Long Ago.
Pratt, Myths of Old Greece.
Johonnot, Stories of Olden Time.
Smythe, Old Time Stories.
Francillon, Gods and Heroes.
Cox, Tales of Ancient Greece.
Hawthorne, Wonder Book.
Smith, Myths and Heroes.
Craigie, Once upon a Time.
Stewart, Tale of Troy.
Baldwin, Story of the Golden Age.
Norton, Heart of Oak Books, III.
De Garmo, Language Lessons, II.
Yonge, Young Folks's History of Greece.
Guerber, Myths of Greece and Rome.
Kingsley, Greek Heroes.

EMILY J. RICE, IN "COURSE OF STUDY IN HISTORY AND LITERATURE," CHICAGO.

Grade I. *The Sun.*

Apollo and the Python. Old Greek Stories. Baldwin.
Aurora.
Phaethon. Cooke's Nature Myths and Stories.
Hercules and the Golden Apples. Adapted from Hawthorne's Wonder Book.
Orpheus. Stories of Old Greece. Firth.
Demeter and Persephone. Cooke.
Thor and his Hammer. Norse Stories Gudrun Thorne-Thomsen.
The Sleeping Beauty in the Wood.
Iduna and her Golden Apples. Gudrun Thorne-Thomsen.
Sunshine Stories. Hans Andersen.
The Dog and the Image. Æsop.
The Ass and his Shadow. Æsop.
Songs by Eleanor Smith.

The Stars.

Peep Star! Star Peep! Wiltse's Stories.
The Star and the Lily. Emerson's Indian Myths.
Legend of the Great Dipper. Wiltse.
Star Dollars. Grimm.
Song. Children's Songs. W. L. Tomlins.

Moon Stories.

The German Story. Fiske, Myths and Myth-Makers.
The Chinese Story. Harper's Magazine LXII, 1881.
The Indian Story. Clodd, Birth and Growth of Myth.
The Indian Story. Hiawatha.
The Iceland Story, or Jack and Jill. Fiske.
The Man in the Moon. Fiske.
Seven Times One. Ingelow.
Children in the Moon. Eliot's Poetry for Children and Whittier's Child Life.
The New Moon. Eliot's Poetry.
Lady Moon.
Songs by Eleanor Smith.

Rainbow Stories.

Jack and the Bean Stalk.
Iris. Cooke's Nature Myths and Stories.
The Indian Story. Hiawatha.
The Pot of Gold.
Bifrost and Heimdall. Norse Stories. Gudrun Thorne-Thomsen.

The Air and the Wind.

Athena and the Olive.
Hermes. Cooke.

Ulysses and the Bag of Winds. Odyssey.
Æneas and the Bag of Winds. The Æneid.
The Four Winds. Hiawatha.
The South Wind and the Sun. Riley.
The Four Winds. Hans Andersen.
Legend of the North Wind, about a Boy. Gudrun Thorne-Thomsen.
The Wind and the Sun. Æsop.
What the Winds Bring. Eliot's Poetry for Children.
Songs from Eleanor Smith and from Walker.

The Clouds.

Apollo's Cows.
Pegasus and Bellerophon.
The Phaeacian Land. Cooke.
Swan Maidens. Cooke.
The Snow Queen. Andersen.
The Snow Man. Andersen.
The Ice Maiden. Andersen.
Songs from authors as above.

The Sea; Water.

Neptune and the Horse.
Stop, Stop, Pretty Water! Whittier's Child Life.
The Fly, the Raindrop and the Sunbeam. The Kindergarten. Donai.
Song. A Million Little Diamonds. St. Nicholas Song.

Animals.

Arachne. Old Greek Stories. Baldwin.
The Cricket and the Poet. Browning's "A Tale."
Orion and the Dolphin.
The Broken Wing. Emerson's Indian Myths.
Aristæus.
Melampus.
The Donkey and the Salt. Æsop.
The Fox and the Stork.
The Happy Family. Andersen.
The Wren and the Bear. Grimm.
The Ant and the Grasshopper. Æsop.
The Crow and the Pitcher. Æsop.
The Hare and the Tortoise. Æsop.
The Ugly Duckling. Andersen.
The Traveling Musicians. Andersen.
Moufflou. Ouida. The Story Hour. Wiggin.
The Brown Thrush. Whittier's Child Life.
The Blue Bird. Whittier's Child Life.
Songs from the same authors as above.

Trees.

Apollo and Daphne. Old Greek Stories. Baldwin.

Rhœcus. Lowell's Poem.
Baucis and Philemon. Cooke, Nature Myths and Stories.
The Anxious Leaf. Norwood.
The Vine and the Oak. Emerson's Indian Myths.
Old Pipes and the Piper of the Dryad. Stockton.
The Discontented Pine Tree. The Kindergarten.
The Walnut Tree that Wanted to Bear Tulips. Wiltse.
The Tree. Bjornsen. Whittier's Child Life.
I 'll Tell You How the Leaves Come Down. Susan Coolidge.

Flowers.

Clytie. Cooke's Nature Myths and Stories.
The Flax Flower. Andersen.
May Blossom. Grimm.
Chinese Story of Narcissus. Fairyland of Flowers.
The Dandelion. Hiawatha.
Little Ida's Flowers. Andersen.
The Pea Blossom. Andersen.
The Story of the Seeds. Geo. Macdonald. David Elginbrod.
The Little Brown Seed. Margaret Sidney.
Little Dandelion. Whittier's Child Life and Eliot's Poetry for Children.

Songs.

Eleanor Smith, Tomlins and St. Nicholas Songs.

When the author is not mentioned, these stories are to be adapted from classic sources. They are not published in suitable form for little children.

Grade II. 1. Stories of Winds, Stars, Animals and Vegetation as in Grade I.

2. Stories of Music and Art.
   - Hermes and His Lyre.
   - Orpheus.
   - Orion.
   - Apollo and Pan.
   - Jubal.
   - Saint Cecilia and the Organ.
   - Mozart and Mendelssohn.
   - Palissy, the Potter.
   - Luca Della Robbia.

Stories connected with early Greek History.
- Prometheus.
- Hercules.
- Jason.
- Mysses.
  - a. Lotus Eaters.
  - b. The Bag of Winds.

c. Circe.
d. Sirens.
e. Calypso's Island.
f. The Tempest.
g. The Phaeacian Land.

Grade III. Siegfried.
Brynhild.
Balder.
Tyr.
Odin.
Heimdall.
Thor's Visit to Jötunheim.
The Apples of Iduna.

Grade IV. Stories from the Odyssey.
Leaving Troy.
The Lotus Eaters.
The Cyclopes.
Eolus and the Bag of Winds.
Circe's Palace.
The Song of the Sirens.
Calypso's Island.
The Tempest.
The Phaeacian Land.
a. The Washing and Game of Ball.
b. The Palace—How Built.
c. Occupations of the Phaeacians.
d. The Games.
e. Story Telling and Music.
f. Ulysses's Journey Home.
g. Ulysses in His Home.

In the suggested reading we find:
The Wonder Book. Hawthorne.
Tanglewood Tales. Hawthorne.
The Odyssey.
Stories of Golden Age. Baldwin.
Old Greek Stories. Baldwin.
Greek Hero Stories. Kingsley.
The Story of Greece. Guerber.
The Tales of Troy. DeGarmo.
Ulysses Among the Phaeacians. Riverside.
Pilgrim's Progress.
Swiss Family Robinson.
Heroes of Asgard. Keary.
Story of Siegfried. Baldwin.

Short Poems: Longfellow's Pegasus in Pound; Schiller's Pegasus in Harness; To a Butterfly, Wordsworth; The Mountain

and the Squirrel, Emerson; The Brook, Tennyson; The Gladness of Nature, Bryant; Heart of Oak, II.

Grade V. *Reading.*
Longfellow's Hiawatha.
Irving's Rip Van Winkle.
Irving's Sleepy Hollow.
Stories from Arabian Nights.
Heart of Oak, IV.

Grade VI. *Reading.*
The Ten Boys on the Road from Long Ago to Now. Jane Andrews.
Stories of the Iliad. Church.
The Tale of Troy. Aubrey Stewart.
The Iliad. Bryant.
Lays of Ancient Rome. Macaulay.
Heart of Oak, III.

Grade VII. *Reading.*
Patriotic poems and addresses chiefly. No mythic material.

Grade VIII. Scott's Novels.
Tennyson's Holy Grail.
Lowell's Vision of Sir Launfal.
Tennyson's Sir Galahad.
Nothing else of mythic or folk-lore import.

Books of Reference.
The Mythology of the Aryan Nations. Cox.
Manual of Mythology. Cox.
Fiske's Myths and Myth-makers.
Ruskin's Athena, Queen of the Air.
Clodd's Birth and Growth of Myth. Humboldt Library.
Bullfinch. Murray and Dwight's Mythologies.
Miss Emerson's Indian Myths.
Wiltse's Stories for Kindergartens and Primary Schools.
Scudder's Fables, Fairy Stories.
Grimm's Fairy Stories.
Hans Andersen's Fairy Stories.
Æsop's Fables.
The Fairy Book. Craik.
Tales of Norse Mythology. Benj. Thorpe.
Andersen's Norse Mythology.
The Nine Worlds. Litchfield.
Horse Stories. H. W. Mabie.
Baldwin's Stories of Siegfried.
DeGarmo's Fairy Tales.
Echoes from Mist Land. Forestier.
Algonquin Legends. Chas. G. Leland.

D. G. Brinton's Aboriginal America.
Myths of Greece and Rome. Guerber.
World's Literature, Vol. I. Burt.
Nature Myths and Other Stories. Fannie J. Cooke.

POEMS.

Eliot's Poetry for Children.
Whittier's Child Life in Verse.
Stevenson's Child's Garden of Verse.

READING.

Nature Stories. Bass.
Book of Fables. Mora Pratt.
Heart of Oak. Norton and Stephens.
Nature's By-ways. Ford.
Fables and Rhymes for Beginners.
Riverside Reader and Primer.
Æsop and Mother Goose. Nash.
A Study of Hiawatha and Nature. Krackowizer.
The First Year of Nature Reader. Beebe.
The Hiawatha Primer. Holbrook.

From "References to Books in the Cleveland Public Library, for Third Grade Teachers of Cleveland." May H. Prentice, training teacher in the Cleveland Normal School. Published by Cleveland Public Library.

Æsop, Fables.
Baldwin, Fairy Stories and Fables.
Baldwin, Fifty Famous Stories Retold.
Beckwith, In Mythland.
Brooks, Stories of the Red Children.
Brooks, Stories which Used to be Told to Indian Children.
Chase, Stories from Animal Land.
Chase, Stories from Bird Land.
Cooke, Nature Myths.
Hawthorne, Miraculous Pitcher.
Johonnot, Grandfather's Stories.
Norton, Heart of Oak, Books I and II.
Puss in Boots.
Scudder, Children's Book.
Scudder, Fables and Folk Stories.
Stevenson, Child's Garden of Verse.
Story of Ulysses for Youngest Readers.
Swiss Family Robinson, arranged for little folks.
Tales from Hans Andersen.
Whittier, Child-Life in Poetry.
Wiggin, Story Hour.

Bibliography.

Books helpful by way of introduction. Some have been mentioned in the preceding list, but not referred to in the text.

Müller. Chips from a German Workshop.
Fiske. Myths and Myth-makers.
Gayley. Classic Myths in English Literature.
Cox. An Introduction to the Science of Comparative Mythology and Folk-Lore.
Guerber. Myths of Northern Lands.
Lang. Modern Mythology.
Warren. Paradise Found.

LITERATURE.

Recent Books on Geography.

1, Tarr and McMurry; Geographies (three books). pp. 1322. The Macmillan Co., New York.

2, H. B. George; The Relations of Geography and History. pp. 296. Clarendon Press, Oxford, England.

3, Jacques Redway; The New Basis of Geography. pp. 225. The Macmillan Co., New York.

One of the most hopeful signs of the times in connection with public education is that scholars are beginning to take an interest in elementary school work, and are making praiseworthy efforts to bring their knowledge down not only to the intelligence of public school teachers, but to the comprehension of children as well. For some time the outlook for geography as a subject of instruction has been somewhat discouraging. For the most part, the teachers have had little, if any, opportunity to make adequate preparation for teaching geography, nor have they received appreciable assistance from the text-books prescribed for the schools; text-books very often prepared by people as little capable of writing books upon geography as were the teachers of teaching the subject. We have often been curious to know whether anything that the ordinary text-book on geography contains would be regarded as reliable and valuable information by any geographical society under the sun, and whether any author or teacher of such a text-book ever was or could hope to become a member of any geographical society.

Of the four writers of the books noticed above, two are members of geographical societies, while three, if not all four, are university men of high standing. If authorship of this kind continues, we do not despair of finding adequate knowledge of geography in the schools, and shall expect to find the schoolmaster, and the school mistress at home in the geographical societies of the country.

While the books vary greatly in character, they agree in one point at least, viz., in emphasizing the relation of the earth to man. There is no doubt that the life element, and especially the element of human life, appeals very strongly to the child's interests. It is well to bear in mind, however, that the life determination is the last, although the most important of the geographical conditions, and that it is doubtful whether it can be made the determining condition of a science of geography.

As a matter of fact, geography *per se* is limited to the consideration of the distribution, forms, and interaction of the elements which constitute the earth, together with the relations of the earth as a part of the solar system. The study of the nature, structure, and action, of these elements leads at once to the sciences of physics and chemistry, while the study of the nature and action of the vegetable and animal life produced upon the surface of the earth through the combined action of these elements under certain conditions, leads to the sciences of biology, botany, zoölogy, anthropology, sociology, etc.

It is true that life in its different developments and activities has

reacted upon, and, to a limited extent, effected changes in geographical conditions on the surface of the earth, bringing about local modifications of climate, soil, etc.; but these modifications have in no way changed the relations of the earth to the sun, or moon, nor have they changed the inherent nature of the elements of land, water, and air, to any appreciable degree. The geographical elements are practically unchanging, and just here is one of the most significant differences between the science of geography and those sciences in which life is involved, the fundamental principle of the latter being change from a lower to a higher form. At present, even as at the beginning, the origin, sustenance and, for the most part, distribution of life in its different forms, are dependent upon the nature and conditions of the earth as an independent existence, and as part of the solar system.

Failure in discriminating between geographical conditions, and the results of these conditions, has plunged the geography of the schools into a most exasperating confusion which has caused an expenditure of time and energy in teaching and learning quite out of proportion to the results obtained.

That the authors above mentioned have attempted to reduce this confusion to order is very evident, yet we cannot but wish that the authors of the "Geographies" had made a still greater effort in this direction, and had excluded from their books everything that does not belong strictly to geography, thereby eliminating much, of the biography, political history, and description of manufactures, which may be more or less remotely determined by geographical conditions, but which in no way affect geographical relations. They would thus have saved themselves a significant amount of time and labor, would have sensibly reduced their pages, would have facilitated the labor of learning, and would have secured a better sale for their books, though it is doubtful whether they could have reduced the selling price, the books being quoted at an extraordinarily low rate as they stand.

These geographies are essentially children's books, the pupil being directly addressed, and taken into the confidence of the authors to the marked exclusion of the teacher upon whose knowledge or teaching power very little, if any, demand is made.

The method throughout is largely synthetic. The questions for review and upon the maps are in part analytic, but not systematically so.

The plan of presentation approaches that known technically as the "Concentric Method," as a result of which the same subjects are presented a number of times, each presentation after the first being somewhat in advance of the one preceding it. By this plan a review of old matter as well as the association of the new matter with the old is secured. This plan is not fully carried out, but sufficiently so to secure several reviews, which are very desirable for young pupils. The United States has four, North America three, and the other topics two presentations.

In the first book some one hundred pages are devoted to "Home Geography," under which head are treated soil, hills, mountains, valleys, rivers, ponds and lakes, the ocean, air, industry, government, maps, etc.

The adverse criticism upon the "Home Geography" is that throughout this part there is a tendency to general statements, and to definitions, which fail to generalize or to define definitely. Observation, naming, and description, ought to characterize this work, generalizations being left for a later period.

The matter of the book is upon the whole good, and fairly well expressed. There is, however, a too evident effort to come down to the

simplicity of the child in the matter of expression. There is at times a flat contradiction between the assumed simplicity and the real difficulty of the subject. This is very marked in the "Home Geography." The effort at simplicity sometimes results in confusion or indefiniteness that is at times exasperating even to adults. Examples of this occur frequently. On page 28 the statement is made that valleys are hollows or low places between hills. This is sufficiently simple for any child who knows hills, but on page 29 the child is informed that many valleys "are only a few inches long, and he can certainly find some of them," thereby implying that the smaller they are the more easily they are to be found, and utterly confusing the idea of valley as a hollow between hills.

The discussion of a *divide*, page 30, is confused by the illustration of the ridge pole of a roof to represent a geographical divide or watershed.

On page 34 the statement is made, "Most people live in some part of a valley," which is true and simple. The review question upon this matter on page 38 is—"In what parts of mountains do most people live?" The answer comes: most people live in some parts of a valley, and if the child thinks at all, the inference is—some parts of a valley are some parts of mountains.

The generalization regarding a river system is not expressed with sufficient clearness to satisfy an adult, not to mention a child.

On page 63 is a statement that leaves the impression that the size of the ocean determines the courses of the great rivers in all parts of the earth.

The general statement concerning air on page 71 is not false, neither is it of any importance, since exactly the same thing is true of a hippopotamus or of any other material object, no distinction whatever being implied.

On page 129 the direction is given: Tell how the climate would change if you were to travel from the northern end of North America to the southern end of South America. As a matter of fact the climate would not change at all. The direction should be so expressed that no doubt of this should arise in the mind of the child.

Throughout the first book the reviewer gains conflicting ideas regarding the ages of the pupils for whom it is prepared. The impression generally is that the children are too young for the thought, or too old for the language in which it is expressed.

The pictures are nearly all pleasing to the eye, but they are often not adapted to their purpose. On page 12 is a representation of a bare rock surface with some crevices extending across it. This picture bears the legend; "Picture of hills and valleys cut in the *soil* by heavy rains." Soil or rock, there are no phenomena represented which can in any geographical sense be called hills and valleys.

On page 99 attention is called to the columns of the Capitol as compared with those of the White House at Washington with the intimation that those of the former are much larger than those of the latter. As the picture is arranged, the columns of the White House appear to be larger than those of the Capitol, and the child, since he can make no allowance for difference in perspective, gains nothing but confusion from the comparison.

These are in themselves but small points. Taken in connection with the education of children, however, they assume enormous importance. We can only recommend an early revision of the Home Geography, if not of the whole of the first book.

The tables of book references, and statistics, as well as the pronouncing vocabularies appear to be excellent.

The work of Mr. H. B. George upon the Relations of Geography and

History is of a very different type. The subject is treated at first generally in an introduction, and afterwards in a series of topics, viz., The General Nature of Geographical Influences, Towns, Nomenclatures, Fallacies of the Maps, Sea Power in Peace and War, Geography in War. In the remaining chapters the outlines of Europe are discussed together with the chief features, geographical and historical, of the different countries of Europe.

The principal propositions underlying the geographical determination of historical development are:

1, Physical features are permanent.

2, They very largely govern the beginnings of history.

3, They affect the destinies of nations after they have been formed.

4, It is only late in history that human labor can avail to modify their influence, and at most this can be done to but a small extent.

The author answers the possible objections to these propositions, and while admitting the local modifications brought about by human activity, he considers that upon the whole, geographical conditions have for ages been practically unchanged.

Throughout the book the author has not failed to make geographical influences more or less apparent. Notwithstanding this, however, there is a tendency on his part to lead the reader away from the contemplation of geographical influences, to the consideration of political and military history and tactics. This may be noticed in Chapters VI, VII, VIII, and XIX.

Perhaps a more fruitful study of the geographical relations to industrial, social, religious, and philosophical history might have been made. The influences of climate upon historical development have been mentioned, but by no means adequately treated. A point which might perhaps receive attention in this connection is human adaptation to new conditions, which has made it possible for man to live and thrive in an environment quite foreign to that of his original existence. This power tends to make him independent of some geographical conditions, and is perhaps quite as remarkable as his power to change the conditions of his environment and to suit it to his needs.

The book is well written, and while it is in no sense a text-book after the approved fashion, it is a book that no teacher of history can afford to do without. It will also be of service to students of political and military geography, and cannot fail to interest the general reader whose tastes lie in this direction.

The last book mentioned above, "The New Basis of Geography," is intended for teachers, and cannot fail to be of essential service. Not the least of its merits are its brevity and conciseness, there being nothing in it to weary the reader, and the matter being so clearly and fully expressed that one feels that one is fully repaid for the effort in reading.

The relation between geographical environment and human activity is emphasized, but the author leans to the economic rather than to the political side. The author shows that the movements of human progress are due immediately or remotely to geographical conditions, that great revolutions, turning points in the world's history may be traced to disturbance of geographic environment. (Introduction, pp. 3, 4, 5.)

The book contains a chapter upon the history of geographical discovery up to the time of Columbus. Following this come chapters upon physiographic processes, the influences of topography, and the economic history of the United States.

The remaining chapters are of value to the teacher; while they are definitely directive and corrective they leave the teacher free to work out his own plans.

Several curious expressions appear in the course of the author's discussion of the presentation of geography. Some of them are: "Method fiend," "Method fad," "Pedlars of Methods," "flesh-pots of Methods." These expressions have no inherent connection with the matter of the book, and we suspect that they are brought in to indicate the author's disapproval of the technique (not the method) of certain teachers. They add nothing to the value of the work, and we can only wonder that a man who understands his subject and his pedagogy so thoroughly should think it necessary to employ them.

MARGARET K. SMITH.

La Mémoire Affective. Son importance théorétique et pratique. By F. PILLON. Revue philosophique, Feb., 1901.

The author assumes a special memory for every kind of image, viz., visual, auditory, tactile, olfactory, gustatory, etc. He also assumes as many special kinds of imagination as of memory, viz., visual imagination, auditory imagination, etc.

With different people, different kinds of memory and imagination dominate, *e. g.*, with the painter, visual imagination and memory dominate, with the musician, auditory memory and imagination, etc.

The least disputable progress of contemporary psychology consists in distinguishing the different memories and in studying their conditions, their development, and their relations.

The diversity of memories for sensations being established, the question arises whether feelings and emotions have also their images, whether there is an affective memory.

Spencer and Bain have recognized such, and though they differ somewhat in their views, they finally arrive at about the same conclusions, viz.:

1, The difference between ideal and actual emotions is less than that between ideal and actual sensations.

2, Emotions are revived less easily than are sensations.

3, In order to be revived with a certain degree of vividness, emotions should be recalled by the images of sensations with which they have been associated.

While Höffding agrees essentially with the above propositions, he believes that the reproduction of emotional images is usually more or less hindered by the dominating feeling of the actual moment, and that the modification of the reproduced feeling by the feeling dominating at the moment may lead to illusions regarding one's past life.

James appears to evade the question, but upon the whole denies the existence of an affective memory, and warns psychologists to avoid the confusion arising from mistaking new and actual feelings for past emotional images.

Ribot not only affirms the existence of an emotional memory, but distinguishes two kinds of the same; the one "true and concrete," the other "false and abstract;" the first being the revived emotion accompanied by organic and physiological states, the second implying the recognition of the emotion without its being felt. This latter is called false because it does not produce a real affective state, it being rather a variety of intellectual memory, and merely a sign of the event. The true or concrete affective memory consists in the reproduction of a previous affective state with all its characteristics.

The author holds that the affective states are subject to abstraction, and considers that this fact dominates the whole of the psychology of the affective memory. Through this abstraction the affective memory does not lose its emotional nature, but may become clearly actualized.

The affective memory is subject to the will, but in a much less degree than the intellectual memory, for the reason that the emotional

images are much more difficult of recollection and reproduction than are the images of sensations. Affective states may, however, be reproduced by the spontaneous play of associations, and do not in every case depend upon the revival of sensations with which they were originally associated.

Fouillée regards the emotion as the concealed relation between states of consciousness. There is a general disposition of feeling which repels that which is contrary to itself, and attracts that which conforms to itself. By what he calls the law of sensitive selection (*selection sensible*) ideas are connected by a relation of adaptation to feelings as well as by mechanical and logical relations. It follows that emotional similarity is the source of the reproduction of sensations and ideas.

Ribot agrees with this proposition generally, while Schopenhauer shows the priority of feeling to intelligence in his "World as Will and Idea."

If feeling lies at the bottom of all mentality, the diversity of mental natures may be attributed to the diversity of emotional and passional tendencies which dominate and move minds. The author denies the immutability of these tendencies, and claims an evolution of feelings as well as of ideas, although that of the feelings is slower than that of ideas. The affective tendencies in the individual are partly inherited, those which are inherited being modified by the life and the affective memories of the individual. The affective memory determines to a certain degree affective habit and heredity.

In the affective memory M. Faguet finds the solution of a psychological problem, viz., that of the polygamous tendency of men, and the monogamous tendency of women.

With women the affective memory, with men the intellectual memory predominates. The author believes that other psychological problems may be solved in a similar way, *e. g.* The reason that the love of parents for their children is stronger than that of children for their parents is to be found in the difference between the affective memories of adults and children.

The affective memory is the grand conserving force of religious belief. Thanks to it religious beliefs withstand logic and science almost indefinitely. In religious revolutions, the new only conquers when it furnishes new feelings and emotions which give rise to new affective memories more powerful than the old.

The diversity of character among individuals is explained by the kinds of feelings which predominate in each person, and which form the ordinary matter of the affective memory.

Action upon the will is only possible through the action of the affective memories brought to bear upon it.

M. Pillon's article is suggestive throughout, and cannot fail to interest the reader. He gives evidence of his own belief in the existence of an affective memory that may perhaps dominate the intellectual memory, but he has not proved his position conclusively. The burden of his proof seems to consist chiefly in citing the beliefs of certain psychologists, *e. g.*, Spencer, Bain, Höffding, Ribot, *et. al.*

In some cases it would appear that the evidence of the characters cited can hardly be regarded as valid. This is especially true regarding Rousseau who was not a psychologist in any sense, and who can only be relied upon for superficial observation, and careless opinion. We should certainly attach less importance to his psychological views than to those of Prof. James, who remains under the implication of carelessness and a desire to evade the question. The position ascribed to Prof. James, however, will probably be supported by the experience of a large number of trained psychologists.

MARGARET K. SMITH.

The Story of a Child. Translated from the French of Pierre Loti by CAROLINE F. SMITH. C. C. Birchard and Co., Boston, 1901. pp. 304.

The author addresses the Queen of Roumania at whose suggestion he began the book in his old age. It is not a scientific study, nor is it philosophical, but mainly autobiographical and somewhat comparable with Sonya Kovalevski's story of her girlhood. It cannot fail to develop a deeper sympathy with childhood, and its sad dreamy style perhaps enhances its value as a kind of revelation.

The Last Confessions of Marie Baskirtseff and her Correspondence with Guy de Maupassant. With a foreword by JEANETTE L. GILDER. Frederick A. Stokes Co., New York, 1901. pp. 157.

This supplementary volume has a new photograph of the writer, her studio and last picture, also photographs of Fleury, Lepage, Lefebvre and Duran. These letters are an important addition to what has hitherto been published, but are less interesting.

The Relation Between Physique and Mental Work, by HENRY G. BEYER. (Reprinted from *The Journal of the Boston Society of Medical Sciences*, Vol V, pp. 437-446.) Boston, Mass., 1901.

Dr. Beyer here sums up his latest investigations, which are marked by a thoroughness and suggestiveness that makes his contributions of great value.

School Hygiene, by EDWARD R. SHAW. The Macmillan Co., New York, 1901. pp. 260.

This volume sets forth the conditions which should surround children at school in order that their mental and physical health may be thoroughly protected. He discusses schoolroom, building, grounds, warming, ventilation, sanitation, baths, furniture, posture, exercise, sight, hearing, handwriting, school diseases, and conditions conducive to healthful mental work, and appends a brief but well chosen biography, all but two titles of which are English. There are plans of buildings, seats, windows, etc., and about sixty cuts in the work.

Handbook of British, Continental and Canadian Universities, with Special Mention of the Courses Open to Women. Supplement for 1901, by ISABEL MADDISON. Bryn Mawr, Pa., 1901. pp. 70.

This handbook gives an account of all the courses open to women in non-American universities and colleges, together with a short account of the general characteristics of the university system of each country. It is indispensable to every American woman who even thinks of going abroad to study. Not only to all such, but to all interested in the subject from whatever standpoint, Miss Maddison has rendered a very great service.

Descriptive Catalogue of a Collection of Objects of Jewish Ceremonial Deposited in the United States National Museum by Hadj Ephraim Benguiat, by CYRUS ADLER AND I. M. CASANOWICZ. Government Print, Washington, 1901. (From the Report of the U. S. Nat. Mus., for 1899, pp. 539-561, with 36 plates.)

Dr. Adler and his associate have here given us a very interesting account of the objects used in the service of the synagogue; those used in prayer; and those on festive occasions in the home; textile illustrations of Bible narrative and miscellaneous matters, and of these they have given us thirty-six very interesting full-page illustrations.

The Twentieth Century New Testament. A translation into modern English from the original Greek. (In two parts.) Part I, The Five Historical Books. Horace Marshall and Son, London, 1901. pp. 254.

This is a clever attempt to give English speaking people of to-day the opportunity of reading the Bible in the English of their own time. It has been translated into most languages, but not yet into English more modern than three centuries ago. Certain it is that many of the passages stand out in a new light, and are strikingly effective.

A Study of Christian Missions, by WILLIAM NEWTON Clark. Charles Scribner's Sons, New York, 1900. pp. 268.

These eleven chapters on the missionary character, motive, object, field, crisis, need, outlook, home side, purpose, with one on denominations in missions, and one on comparisons with other religions, are a strong, earnest plea for them. The work is not especially scholarly, and has no literary references whatever, but is largely sermonesque.

Monopolies Past and Present, by JAMES E. LEROSSIGNOL. Thos. W. Crowell and Co., New York, 1901. pp. 256.

In these eight chapters the writer discusses the nature of monopolies; those of ancient and mediæval times; guilds; excessive trading companies; patents and copyrights; municipal, railway, and capitalistic monopolies. Concise bibliographies are appended at the beginning of each chapter. It is an able, scholarly, and very useful work.

New York in Bondage, by JOHN D. TOWNSEND. Issued for subscribers. New York, 1901. pp. 251.

These papers are published by Mr. Townsend's daughter, and are dedicated to all who favor municipal government. They are an invaluable contribution to the history of New York from the Tweed ring down to 1895 by a man who was a part of the history he describes, and honest, upright, and able through it all.

The Children of the Nations. A Study of Colonization and its Problems, by POULTNEY BIGELOW. McClure, Phillips and Co., New York, 1901. pp. 365.

This is dedicated to Mark Twain, the most philosophic of travellers and the most travelled of philosophers, who loves his country, yet speaks ill of no other. It is an attempt to explain the influence which the mother country exerts upon colonies and they upon her, whether good or evil, and is to some extent the result of personal observation in many parts of the world. Spain, Germany, Portugal, Scandinavia, the Boers, China, Russia, colonial France, Australasia, British Guiana, and finally the philosophy of colonization and America as a colonist, are the chief topics treated.

The Woodpeckers, by FANNIE HARDY ECKSTORM. Houghton, Mifflin and Co., Boston, 1901. pp. 131.

This interesting and sympathetic little volume, illustrated with several colored cuts, gives a good picture of the bill, foot, tongue, tail, kinds, mates, food, etc., of woodpeckers, with an appendix on the different species in this country and their description and classification.

The Bird Book, by FANNIE HARDY ECKSTORM. D. C. Heath and Co., Boston, 1901. pp. 276.

The author loves birds far better than she does scientific terminology. Her chapters are—water birds; structure and comparison; problems of bird life; some common land birds; and an appendix con-

taining an account of the zoö-geographical divisions of the world, with a list of two or three score books.

An Outline History of the British Empire from 1500 to 1870, by WILLIAM HARRISON WOODWARD. The Macmillan Co., New York, 1901. pp. 232.

This is an abridgement of the author's "Short History of the Expansion of the British Empire" first published in 1899. It is an admirable compend, and its maps are especially valuable and illustrative.

A Short History of the Greeks, by EVELYN S. SHUCKBURGH. The Macmillan Co., New York, 1901. pp. 388. Price, $1.10.

The writer has here striven to select for fullest treatment those topics which best illustrate the political life and intellectual activities of the Greeks, wherever they lived, and he has added a brief sketch of Greek literature in the last chapter in order to draw attention throughout to the intellectual and artistic movements as they became prominent from time to time, for these constitute the chief service of Greece to the world. The book has a good index, and is well supplied with maps, but has little other illustrative material.

A Dictionary of Architecture and Building: Biographical, Historical and Descriptive, by RUSSELL STURGIS. (In three volumes.) Vol. II, pp. 1060. F-N. The Macmillan Co., New York, 1901. Price, $6.00 per volume.

This second volume is no less copiously illustrated and perhaps even more interesting than the first. The illustrations are not merely the conventional ones in the common lines of European travel. While these are not omitted, where in point, the range is meant to be universal, and just those monuments, buildings, ornaments, etc., are chosen from all over the world, and its history which best illustrate the theme in hand.

Heath's Home and School Classics. D. C. Heath and Co., Boston, 1901. Price, 10 cents.

The Siege of Leyden Condensed from J. L. Motley's "Rise of the Dutch Republic." Edited by WILLIAM E. GRIFFIS.

This makes a very interesting story with the local cuts and illustrations, and especially the impressive three-page folder of the relief fleet dashing through the land divider, from an old Dutch print.

Anthology of Latin Poetry, by ROBERT Y. TYRRELL. The Macmillan Co., New York, 1901. pp. 310.

These specimens of Latin poetry are intended as a companion volume to the author's eight lectures, published in 1895, and are gathered from nearly seventy authors.

The New Era, by E. O. BUTTERFIELD. Specially designed for Day Schools, Singing Schools, Convocations and the Home. C. W. Bardeen, Syracuse, N. Y., 1901. pp. 155. Price, 75 cents.

This book embraces in part the new idea notation, which consists in putting the initial letter of the note name—do, re, me, fa—in place of the round head of the note. The great defect of it is too much Butterfield music. The musical quality is far different from that which everything now indicates is the best need for children.

Chemical Lecture Experiments, by FRANCIS G. BENEDICT. The Macmillan Co., New York, 1901. pp. 436.

This is a text-book designed to accompany lecture room demonstra-

tions, and has one hundred and sixty-three admirably chosen cuts for further illustration. Experiments are more or less independent, and so are in most instances prefaced with a short statement of their nature.

Macmillan's Pocket American and English Classics. The Macmillan Co., New York, 1901. Price, 25 cents.

Tennyson's Idyls of the King. Edited by WILLIAM T. VLYMAN. pp. 319.

A brief life of Tennyson is prefixed to this well annotated and convenient pocket edition.

Foundation Lessons in English, by O. I. WOODLEY AND M. S. WOODLEY. Books 1 and 2, pp. 201 and 269. The Macmillan Co., New York, 1901.

These two volumes are in part a return to the old methods of grammar and analysis.

The Blaisdell Speller, by ETTA A. BLAISDELL AND MARY F. BLAISDELL. Book 1, pp. 96. The Macmillan Co., New York, 1901.

This is in part a return to the old methods of spelling, which have been so much neglected hitherto. Provision, however, is made for the now better understood factors of eye and ear training, and there are good lists of words.

The Second School Year, by HENRIETTA M. LILLEY. C. W. Bardeen, Syracuse, N. Y., 1901. pp. 224. Price, $1.00.

This a manual of the entire work of the year, laying down its plan and matter, and designed to cultivate attention, industry, neatness, helpfulness, and honesty in thought and expression. The matter is near the child's life, and stress is laid upon the fact that his thoughts are primitive, and that therefore he is interested in primitive people.

Suggestions to Teachers, by ALBERT PERRY BRIGHAM. Designed to accompany a Text-Book of Geology. D. Appleton and Co., New York, 1901. pp. 75.

The Proceedings of the Sixth Annual Meeting of the Congress of Religion held at Boston, Mass., April 24-29, 1900. The Unity Publishing Co., Chicago. pp. 245.

Über John Dewey's Theorie des Interesses und seine Anwendung in der Pädagogik, von LUCINDA P. BOGGS. C. A. Kaemmerer and Co., Halle, 1901. pp. 73.

The Writings of King Alfred d. 901, by FREDERICK HARRISON. (An Address delivered at Harvard College, Mass., March, 1901.) The Macmillan Co., New York, 1901. pp. 31. Price, 25 cents.

Notes for Teachers of English Composition, by G. R. CARPENTER. The Macmillan Co., New York, 1901. pp. 29. Price, 25 cents.

Les Animaux sont-ils conscients? par ED. CLAPARÈDE. Ch. Eggimann, Genève, 1901. pp. 24. (*Rev. Philos.*, May, 1901.)

The Circulation in the Nervous System, by HERMAN GASSER. Journal Publishing Co., Platteville, Wis., 1901. pp. 156. Price, $1.00.

Heath's Home and School Classics. D. C. Heath and Co., Boston, 1901. Price, 10 cents.

Eyes and No Eyes and Other Stories. Edited by M. V. O'SHEA. pp. 66.

COMMUNICATION.

To the Editor of the Pedagogical Seminary.

DEAR SIR:

In my recent paper, "Studies in Rhythm," the following foot note should have appeared on page 28: "This classification is taken from a communication containing a partial report of a lecture given by Charles Welsh before the Eastern Kindergarten Association. Mr. Welsh appears to have made an extended study of nursery rhymes, and his conclusions seem to be in accord with the results of my own investigation."

I regret the omission, and take this opportunity to acknowledge my indebtedness to Mr. Welsh who, since the writing of my article, but before it was printed, has published a collection of the Mother Goose rhymes, classified according to the plan indicated in his lecture and set forth in my article.

CHARLES H. SEARS.